Impact of Cross Channel Integration Capabilities on Consumers' Perceived Value, Brands' Preference and Loyalty in a Retail Channel Structure: A study from demand side perspective

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June, 2024

Declaration

I hereby declare that the research work embodied in the present thesis entitled

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is the outcome of my own efforts except for the guidance received from the Thesis Advisory

Committee and the references to the earlier works that have been duly acknowledged. I further

declare that this work has not been submitted to this University or any other university for any

other exam.

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This is to certify that the Thesis entitled

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embodies the work of the candidate himself / herself. The candidate has worked under our

guidance and in our opinion the Thesis fulfills the requirements of SVKM's NMIMS

University, Mumbai relating to Degree of Ph. D. (Management Studies).

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Dedication

To my parents, and parents in-laws; my wife, Shweta; my sons, Aryan and Shuban; my brothers, Krishna, and Brijesh, sister; Sunita, your love, support, sacrifices and encouragement helped me to achieve my dream. I could not do it without you.

I would like to express my sincere gratitude towards my wife, Ms. Shweta for her unconditional and unlimited support, help, and encouragement.

I love you all.

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I am grateful to have the privilege and be esteemed to work under the supervision and guidance of all the TAC members, all of whom possesses a wealth of knowledge, and expertise. I would also like to thank Professor Dr. Mayank Joshipura for his continuous support and encouragement.

I would lilke to extend my gratitude to the academic team at Narsee Monjee School of Management, Mumbai for their assistance throughout my study term. I would like to express my gratitude to the administrative personnel at NMIMS, specifically Ms. Pinky Shah, the course coordinator, for her attentive assistance. Furthermore, I would want to express my gratitude to all my colleagues at

NMIMS who have supported me throughout my journey, both in times of joy and sorrow.

Preface

This thesis, titled " Impact of Cross Channel Integration Capabilities on Consumers' Perceived Value, Brands' Preference and Loyalty in a Retail Channel Structure: A study from demand side perspective," is the culmination of my research efforts over the past seven years as a Ph. D scholar at School of Business Management of SVKM's NMIMS University. The work presented here investigates the multifaceted effects of cross channel integration capabilities of manufacturer-sponsor consumer brands on factors and overall customer perceived value, subsequently influencing the consumer behavior of brand preference, and brand loyalty in the retail channel structure or retail-value chain.

The main impetus for this research stems from the changing retailing landscape triggered by the three elements of emergence of digitalization, the explosion of information, and a seismic shift in the customer behavior, which has resulted in the retailer and brands to embarked upon a journey called omnichannel transformation. As the global strategy of omnichannel transformation gains popularity, retailers and brands are always striving to integrate their channel management operations to provide customers a seamless and uninterrupted experience. Previous studies on the transformation to omnichannel have only focused on retailers or their brand counterparts. However, manufacturers are also developing proactive strategies to achieve a seamless transition to omnichannel, in support of the brands they endorse. This study, by investigating the impact on consumer behaviour that arises from a manufacturer-sponsor brand's transformation to an omnichannel approach, aims to contribute to the understanding of these impacts and provide insights that can extend the literature and inform management strategies to leverage these effects for the mutual benefits to the organization and consumers.

This thesis is divided into eight chapters, with the first discussing the research context, the second reviewing existing literature, and the third synthesizing findings from 94 relevant studies. The fourth chapter discusses the theoretical background, conceptual and model development, and hypotheses on the relationships between cross-channel integration and various factors of customer perceived value (CPV), overall CPV, and consumer behavior of brand preference, and brand loyalty. The fifth chapter discusses the research methodology adopted, including the deductive versus inductive approach, research design, quantitative study, sample and procedure, data collection, and measures of the construct. The sixth chapter presents data analysis and survey results for both empirical studies, comparing the modified model with previous research and justifying the lack of significance in some correlations. The seventh chapter presents the final validated updated model and discusses the tested hypotheses. The final chapter presents a visual representation of the research contributions and acknowledges its limitations, and future research.

I would like to acknowledge several individuals and organization who have played a vital role in my academic journey. I thank Professor Dr. Tapan Panda for his constructive suggestions and support, Professor Dr. Sunil Sahadev for his constant guidance and encouragement, Professor Dr. Sanjeev Prashar for his availability and guidance, and Professor Dr. Rashmi Khatri for her help and guidance. I also thank Professor Dr. Mayank Joshipura for his continuous support and availability. I also thank the academic team at Narsee Monjee School of Management, Mumbai, the administrative personnel at NMIMS, and all the colleagues who have supported me throughout the journey.

On a personal note, my interest in pursuing the program sparked during my executive MBA studies (which was my second MBA course) with NMIMS when Dr. T.T. Kanchwala encouraged me to enroll for the program. The interest on omnichannel unearthed during the process of the program and while interacting with Dr. Shamim Mondal, and Dr. Sreeram. Sivaramakrishnan. This thesis represents not only an academic endeavor but also a deeply personal journey fueled by a passion for omnichannel retailing.

Finally, I am indebted to my family and friends for their unwavering support and encouragement. Their belief in the importance of this work has been a constant source of motivation.

I hope that this thesis will contribute to the growing body of knowledge on omnichannel and serve as a foundation for future research in this critical area.

Thank you for taking the time to read and consider this work.

Sincerely,

Dinesh Sharma
June, 2024

Abstract

As omnichannel transformation becomes increasingly popular as a worldwide strategy, retailers and brands are continuously working to combine their channel management operations in order to provide consumers a smooth and uninterrupted experience. Prior research on omnichannel transition has solely concentrated on retailers or retailer brands. Nevertheless, brands supported by manufacturers are also formulating proactive tactics to accomplish omnichannel transition. This study examines the effects on consumer demand resulting from a brand's omnichannel transition. By identifying such five themes through an extensive literature review process, this thesis presents combination of five studies by conceptualizing cross channel integration level of manufacturer-sponsor brands and studying its impact on the consumer behavior. The identified five themes comprises of examining manufacturer-sponsor brands (and not retailers), analyzing the demand-side perspective (construct of perceived value), exploring cross channel integration as a service (and deploying models of service), investigating both the dimensions of consumer behavior together, that is, brand preference, and brand loyalty across different product categories.

The first study is focused on meta-analysis approach. By identifying disconnect aspects in the emerging body of study on omnichannels (OMC), which have diverse effects on various consumer behaviours, this study was undertaken. Further, the presence of the disconnected factors emphasizes the need to collect and combine these findings in order to offer practical and useful information for professionals. These insights can help achieve the targeted consumer behavior results and successfully execute their tasks in the field. This study conducts a comprehensive evaluation and analysis of previous studies to determine the components of customer perceived value (CPV) that have an impact on consumer

choice outcomes (CDO) in a highly integrated cross-channel environment, also known as OMC. CDO, or customer Decision-making Process, encompasses the several stages of decision-making that a customer goes through while making a purchase. These stages include preference, intent, choice, purchase, usage, and loyalty.

This is followed by the empirical study that was conducted by creating a new concept called "cross channel integration levels of brands" based on previous research that discusses several stages of firms' omnichannel transformation. We then analyze the effects of this concept using the SOR framework. Subsequently, we verify the accuracy and effectiveness of our model by conducting an extensive consumer research, including a diverse range of data from both experts and consumers, and utilizing multi-level modeling in both these studies. The study reveals that the transition level of brand cross channel integration has an influence on the perceived value of the brand among consumers. This impact is mediated by several factors of consumer perceived value, related to consumer assessments of the brand. Final model comprise of factors of customer empowerment, awareness, seamless experience, and risk. Further, the perceived value influences both, brand performance, and brand loyalty.

Thus, it is necessary for manufacturer-sponsor brands to establish and execute suitable omnichannel capacity in order to achieve the needed level of loyalty. This study has important implications for managers who are interested in developing an omnichannel strategy, especially for consumer brands that are sponsored by manufacturers.

Keywords: Cross channel integration (CCI), Customer perceived value (CPV), Brand preference (BP), Brand loyalty (BL), Awareness, Customer Empowerment (CEmp), seamless experience, risk

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List of Abbreviations

CCI	Cross channel integration
CPV	Customer perceived value
BP	Brand preference
BL	Brand loyalty
CEmp	Customer Empowerment
SQ	Service quality (SQ),
ER	Emotional response
CDO	Customer decision outcome
MCP	Multichannel presence
SRM	Siloed retail-mix
IMC	Integrated marketing communication
ICOF	Integrated customer order fulfilment
IACI	Integrated access to customer information
CF	continuity of foundationals
RSC	Rear-end system consolidation
OT	Organization transfiguration
MC	Multichannel
OMC	omnichannel
MSR	Multi-channel siloed retail-mix
ICT	Integrated consumer transaction
OSI	Organization-wise seamless integration

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1.1. Introduction

This chapter presents an outline of the thesis, starting with an explanation of the research's context and rationale. The research problem is defined, and the study's objectives are laid out. The methodology used in the research is briefly described. The chapter closes by highlighting the study's importance and originality in the marketing field. It also outlines the thesis structure and organization.

1.2. Research context and rationale

1.2.1. Retail channel structure / retail value-chain

Based on the Porter's (1985) concept of the 'value-chain', retail value-chain refers to the information and product flow between design, manufacturer, suppliers, shipping agents, warehouses, shelves, consumer and retailers to the point of consumption (Hübner et al., 2018; Reinartz et al., 2019). The value chain is a set of processes where all the stakeholders adds value to the customer across various activities (Porter's, 1985). In retailing, the value chain comprises of all the stakeholders and processes needed for retailers to deliver an end product or service to a customer (Hagel et al., 2016). In its most fundamental form, this value-chain includes (brand) manufacturers, retailers, and consumers (Reinartz et al., 2019).

1.2.2. The history of retail-channel structure

Historically, retailing (or retail-channel structure) operated primarily through physical stores, with a linear supply chain from manufacturers to wholesalers to retailers. This kind of retailing has undergone a seismic shift that is filled with fascination and a significant development, marked by various innovations. McKinsey (mckinsey.com, 2018), through the article entitled "*Retail 4.0: The Future of Retail*" traces the history of retailing from *the birth of the first modern supermarket in Memphis, in 1916 in Tennessee, to Retail 4.0 where omnicanality*

is the watchword, and informed that the retail has gone through four different historical periods all characterized by a common thread: technology as an element of change, evolution and transition to the new era.

The first of these breakthrough was triggered by the opening of a "modern supermarket" in 1916 by Piggly Wiggly (innovator) driven by an intuition of a salesman of a large retailers and an idea of "self-service concept", which marked the beginning of retail 1.0: until then Retail, which is identified in a "phase 0", was made up of multi-product grocers where it was not possible to choose goods independently but simply to order them from the salesman or merchant This was followed-up with retail 2.0 in 1962 wherein Walmart & Carrefour opened "Modern Hypermarket" by the idea of "bringing everything under one roof" and through RFID technology. With the rise of internet in the early 1990s, Amazon brought the concept of "E-commerce" in 1995 through breakthrough technology that marked the beginning of retail 3.0. Initially, these channels operated separately from physical stores, but as online shopping gained popularity, retailers started to realize the potential for integration. This marked the beginning of the Retail 4.0 in 1999 by the introduction of the concept of 'multi-channel" or "omni-channel", through the concept of interweaving between physical and digital world, which comprise of the multiple channels such as stores, catalogs, and websites. However, integration between these channels remained limited, with separate inventory systems and inconsistent customer experiences. This led to the introduction of the concept of omnichannel retailing that gained traction in the late 2000s and early 2010s. Omnichannel strategies focus on providing a seamless shopping experience across all channels, allowing customers to move between them effortlessly. This requires integration of inventory management, customer data, and marketing efforts.

Advances in technology, such as cloud computing, big data analytics, and mobile devices, have played a crucial role in enabling cross-channel integration or omnichannel. Retailers can now leverage these technologies to gather and analyze data from various channels, personalize marketing messages, and optimize inventory management. Retailers have implemented innovative strategies like click-and-collect and ship-from-store to bridge the gap between online and offline channels. These initiatives allow customers to order online and pick up in-store or have items shipped from the nearest store location, improving convenience and reducing delivery times.

This evolution has resulted in enhancement of the customer perceived value such as low price, large stores, better parking lots, and in-store promotions in retail 1.0 to greater choice, and customer service through shopping experience, in retail 2.0. Retail 3.0 offered lower price, better assortments, convenience, and loyalty. Retail 4.0 and thereafter provided more channel choice for customers, gaining from personalized services and promotional schemes, increased convenience during purchase journey, seamless shopping experience, and seamless brand experience.

To this end, constant technological advancement, information revolution and digitalization happening in a market places influence changes in consumer behavior as the individual constructs malleable perception that leads him/her towards technology adoption decision (Straub, 2009). Hence, customers have adapted to the use of several channels while making purchase decision in last decade, and ‘retail shopping’ is being conducted on phones, social platforms, tablets, interactive kiosks and in-stores unlike earlier when single channels were preferred. A *Harvard Business Review* article shows that the Omni channel customers love using retailer’s touchpoints, in all sorts of combinations and places before making a purchase (Orendorff, 2018). Not only did they use smartphone apps to compare

prices or download a coupon, but they were also avid users of in-store digital tools such as an interactive catalog, a price-checker, or a tablet." Further, with Omni-channel, every customer interaction changes their overall experience of product & brand. "Business Insider'" found that customers engages & purchases more often with brands that engages with them through Omni-channel strategy.

This has resulted in an opportunity for a brand and a retailer to augment their channel capabilities and integrate them (Mirsch et al., 2016). Hence, organizations adopt "Omni channel" / "Cross-channel Integration" strategy wherein "fully-integrated shopping experience is provided by uniting experiences from "offline" to "online" and everything in-between.

Parker and Hand (2009) and Ortis and Casoli (2009) introduced the term "Omni" in the IDC's Global Retail Insights research unit reports. "Omni" is a Latin word meaning "all" or "universal"; hence, an "omnichannel shopper" refers to the evolution of the multichannel customer who uses integrated channels simultaneously.

1.2.3. Clarification of the terminologies used for channels in retail-channel structure

Organizations' channel strategies have evolved from single channel to siloed multi-channel (MC) to integrated cross-channel (CCI) and then to fully-integrated Omni-channel (OMC) by transformation process that passes through various degrees (phases) of cross-channel integration (CCI) (Mirsch et al., 2016). Cross Channel Integration is defined as the degree to which a firm coordinates the objectives, design, & deployment of its channels to create internal synergies & benefits to customers (Cao & Li, 2015). MC is a blending of mutually exclusive offline and online channels (Montoya-Weiss et al., 2003) like retail storefront, website,

catalogue & promotional channels where they operates in silos. OMC is a strategy where communication channels & supporting resources cooperate to achieve improved user experience & relationships. Verhoef et al. (2015) defined omnichannel management as “the synergetic management of many available channels and customer touchpoints to optimize the customer experience across channels”. However, terms such as multichannel management, crosschannel management, omnichannel management, channel integration, and other variations coexist and often used interchangeably and without demarcation (Beck & Rygl, 2015; W.-J. Huang, 2020; Klaus, 2013; Mirsch et al., 2016; M. Yrjölä et al., 2018)

Levy et al. (2013) and Beck and Rygl (Beck & Rygl, 2015) clarified the above three concepts in the taxonomy, namely Multi-, Cross-, and Omni-Channel Retailing, and defined them as follows.

Multi-Channel Retailing refers to the process of selling goods or services across several channels, including all commonly used channels. In this approach, the consumer does not have the ability to initiate interactions across channels, and the retailer does not have control over the integration of these channels. A Multi-Channel Retailer is a business that offers products or services over multiple channels, including all commonly used channels. In this case, the consumer does not initiate the connection with the channel, and the retailer does not have control over the integration of the channels.

Cross-Channel Retailing refers to the process of selling goods or services over several channels, including all commonly used channels. This allows customers to engage with different channels to make purchases, and the retailer has control over integrating these channels to some extent. A Cross-Channel Retailer is a business that offers products or services through multiple channels, including all popular

channels. This allows customers to interact with other channels partially, and the retailer has control over integrating different channels partially.

Cross-Channel Retailing refers to the process of selling goods or services over several channels, excluding all commonly used channels. In this approach, customers have the ability to engage with the entire range of channels, and the retailer has complete control over the integration of these channels. A Cross-Channel Retailer refers to a business that offers products or services across many channels, although not necessarily through all available channels. In this case, the consumer has the ability to engage with the retailer across all channels, and the retailer has complete control over the integration of these channels.

Omni-Channel Retailing refers to the comprehensive process of selling goods or services through several popular channels, allowing customers to engage with the entire range of channels and enabling retailers to seamlessly integrate all channels. An Omni-Channel Retailer is a business that offers products or services over several channels, allowing customers to engage with all channels and enabling the retailer to have complete control over channel integration.

Thus, the concept of cross channel integration may be understood as a continuum, with multichannel placed at one end, representing the presence of separate and isolated channels, and omnichannel representing the total integration of all channels, placed at an another end.

1.2.4. Cross-channel integration service or omnichannel

Bendoly et al. (2005) categorizes cross channel integration into two types: "physical integration" and "information integration". Hocker et al. (2018) further divided the concept into two types of “information integration” with sub-categories as internal

information_referring to 'corporate logistics' and 'processes', and external information_referring to the aspects that generate customer loyalty, customer satisfaction & customer retention.

Further, Cross-channel integration has been defined as integrated branding, mutual channel cross promotion, exploiting channel specific capabilities (Goersch, 2002); cross channel shopping / physical integration (Bell et al., 2014; Bendoly et al., 2005; Chiu et al., 2010); Consistency (Pentina and Hasty, 2009; Lee and Kim, 2010; Goersch, 2002); integrated logistics ((Pentina et al., 2009); Goersch, 2002); assortment alignment (X. Pan et al., 2003); informational integration (Bendoly et al., 2005; Goersch, 2002); reciprocity (Lee and Kim, 2010), store locator, or information management (Pentina et al., 2009).

Cao and Li (2015, 2018)**,** through customer-centric and firm-centric approaches, provided complete and all encompassing definition of cross channel integration services. The definition is:

"Cross-channel integration is the degree to which a firm coordinates the objectives, design, and deployment of its channels to create synergies for the firm and offer particular benefits to its consumers".

Cross channel integration is essentially a "service" that a brand provides to its consumers to facilitate them with a "seamless experience" while buying process (Trenz et al., 2020).

1.2.5. Customer Experience

Customers have desire of fulfilling their experiences and not just product (Abbott, 1955; Alderson, 1957). Multi-dimensional definition incorporating various aspects of human behaviour of decision-making and experience encompasses the cognitive,

emotional, behavioral, sensory, and social responses of customers to a organization's offers throughout during their purchasing process (Lemon & Verhoef, 2016).

Customer Experience is the new competitive battleground (Pine & Gilmore, 1998)***. It is where business is going to be won or lost***

- Tom Knighton

The above perspective further substantiate the body of literatures that posit "customer experience" as vital mechanism to attain sustained competitive advantage (for example, (Shaw & Ivens, 2003). This implies that to have edge over competition, brands should acquire and develop capabilities for creating such 'experiences' for consumers and attain unique 'position of advantage' in the marketplace.

1.2.6. Cross channel integration services as channel's resource-based competitive advantage

The resource-based concept of competitive advantage centers on the assets and talents that serve as the "sources of advantage" (Walley & Thwaites, 1996). As discussed, "Experience", being the source of advantage in the context, cross channel integration services of brands shall create competitive advantage through focusing on development of assets and skills required. Innumerable compartmentalization and categorization of resources have been suggested, and the term "resource" often has been replaced with either "competence" or "capability", highlighting the prominence on "knowledge" and "skills" (for example, (Prahalad & Hamel, 1990). There is distinction drawn between two kinds of resource; tangible resources, which includes operand resources, and assets, and intangible resources, which consists of skills, and knowledge, as well as operant

resources that provide customer value preposition (Vargo & Lusch, 2004). Furthermore, consumers are regarded as a valuable asset in terms of their relationship with the market. The management of customers is considered an intellectual capability that greatly enhances competitive advantage. A company can be considered to have a customer-based advantage when a certain group of customers prefer and select its product or service over those offered by one or more competitors (Srivastava et al., 2001).

Customer value refers to the subjective judgments and evaluations that customers have of their overall experience. On the other hand, competitive advantage is when a firm effectively utilizes its resources and skills to generate this customer value (Rintamäki et al., 2007).

Hence, we posit cross channel integration services as one such capability developed through various sets of tangible and intangible assets and resources.

1.2.7. Cross channel integration service as customer value proposition

The customer value proposition is a strategic management decision that determines what the firm believes its customers value the most and how it can supply that in a way that gives it a competitive edge (Rintamäki et al., 2007). Cross channel integration service provides brands the kind of competitive advantage that is necessary to stay ahead of their competition. It further proves to be a value proposition for the customers as (a) it enhances the advantages and/or reduces the trade-offs that the customer considers significant, (b) it is based on the firms's superior competencies and resources, which it can leverage more efficiently than its competitors, and (c) be distinctly dissimilar (unrepeatable) from competition.

Hence, deployment of cross channel integration service strategy develops resource-based competitive advantage as experience delivered manifests into perceived value for customers. Further, there is a broad consensus among scholars that 'Experience' is a construct that customers perceive as core "value" because of the reason that customer value is derived from meticulously crafted customer experiences (Berry, Carbone, et al., 2002; Carbone, 2010; Meyer & Schwager, 2007; Morgan & Rao, 2003; Schmitt, 2010). Further, (Itami & Roehl, 1991) used "added value" to explain durable competitive advantages from a strategic perspective.

Further, a body of literature, through deployment of various resources consider cross channel integration as a stimuli that leads to organism of perceived value, such as; integrated consumer order fulfillment and integrated access to customer information, continuity of foundationals, rear-end system consolidation, and organizational transfiguration (Cattapan & Pongsakornrungsilp, 2022), logistic service integration (Zhang et al., 2018), channel service configuration and integrated interactions (Y. Li, Liu, Lim, et al., 2018; Natarajan, Ramanan, et al., 2023), omnichannel collaboration (Chen et al., 2022).

Costa Climent et al., 2022 and Iftikhar and Helfert, 2019 through conceptual overview offered a guidance and concluded that an omnichannel is a source of value creation. Further, the unique value creation brought about by omnichannel integration transformation (Cao, 2014; Y. Chen and Chi, 2021; Emrich et al., 2015; Herhausen et al., 2015; M. M. Pereira and Frazzon, 2021) increase customer value perceptions of customers by providing an integrated service experience that is not available to customers in individual channels (Wagner et al., 2013; Zhang et al., 2018), thereby helping organizations to better serve customers. Traditionally, some of the perceived value factors of consumer includes; emotional value, social value,

functional value (J. C. Sweeney & Soutarh, 2001), extrinsic value - utilitarian use, intrinsic value - hedonic appreciation, and systematic value - logical reasoning (Danaher & Mattsson, 1994; De Ruyter et al., 1997; Lemmink et al., 1998), quality, emotional response, reputation, monetary and behavioral price (Petrick, 2002).

We discuss these perceived values in detail in the subsequent sections.

1.2.8. Customer perceived value

Organizations, in order to stay ahead of competition, need to generate higher value for consumers (Arun Sharma et al., 2001). Cross-channel integration is one such strategy, which promises higher value for consumers through capabilities as discussed.

The 'value' is probably most used or rather misused construct in management literature which is at times even vague (Khalifa, 2004). Hence, it is imperative to define 'value' with clarity and for organizations to understand the value it delivers to consumers which is not the case with most even when it promises upper edge over competition (James C. Anderson, 1998).

In this study, we define perceived value as "a ***trade-off between perceived quality and sacrifice"*** (Dodds & Monroe, 1985) in its most simple form. However, as this unidimensional and simple form has been criticized in the literature for not accounting for more dimensions, such as ***intangible and emotional*** factors (Zauner et al., 2015); (Sanchez-Fernandez & Iniesta-Bonillo, 2007), we explore complex and multidimensional models of value (Babin et al., 1994; Danaher and Mattsson, 1994; Holbrook, 1994; Sheth et al., 1991; Woodruff and Gardial, 1996; Zauner et al., 2015). Within the multidimensional perspectives, numerous studies have been presented in separate research streams (Sanchez-Fernandez & Iniesta-Bonillo,

2007). However, all of which proposes different understandings of the elements in CPV and, on top of that, there are only a few attempts of identifying the actual value drivers within them (Gronroos, 1984).

1.2.9. Brand preference

Brand preference is "a set of brand assets and liabilities linked to a brand and a customer's subjective and intangible assessment of it, above and beyond its objectively perceived value" (Keller, 1993; V. Shankar et al., 2008; D. C. Smith & Aaker, 1992).

There are two diametric opposite perspective of brand preference is available in the literatures; "**archaeological**" and "**architectural**" (John W. Payne et al., 1999),

Some of the literatures have conceptualized brand preference as a model of consumer behaviour (Howard & Sheth, 1969). Further, factors of brand preference is categorized into three types based on the characteristics that condition consumer behaviour and they are consumer himself, product/brand or object and situation (Belk, 1974, 1975; Woodside and Trappey, 1992).s

The findings involve impact on brand equity due to social media advertising (J. Hanaysha, 2016), Instagram marketing (S. Khan, 2018), Social media marketing components of user-generated contents, customer engagement, firm-generated contents and eWOM (Zahoor & Qureshi, 2017), perceived social media marketing (Kim and Ko, 2012), content (Estrella-Ramón et al., 2019). Brand equity comprises of "brand awareness", "brand loyalty", "brand trust", "brand image", "perceived quality", and "brand association".

Similarly, body of literature that studied several other dimensions including brand awareness, branding, brand building, brand preference, brand perception.

Brand preference, as defined in this research, is a behavioral inclination that indicates a consumer's attitude towards a particular brand (R. Ebrahim et al., 2016).

Previous empirical study has empirically related perceived value and preference (Alamro & Rowley, 2011; Hellier et al., 2003). When a consumer recognizes the value obtained from the characteristics of a CCI service, the customer forms a preference.

1.2.10. Brand loyalty

Brand Loyalty is the state in which individuals have a strong and unwavering dedication to repeatedly purchaseing or supporting a favoured product or service, resulting in constant brand patronage (Knox and Walker, 2001; Oliver, 1999; Rundle-Thiele and Mackay, 2001).

Customer loyalty is a significant concept for brands in the field of marketing research. Oliver's (1999) proposed a model of loyalty consisting of four stages. First, customers develop favorable attitudes towards the information offered by a brand. Second, they develop a liking for the brand. Third, they establish behavioral intentions towards the brand. Finally, they translate these intentions into real behaviors. Customer Loyalty is advantageous for both brands and consumers since it diminishes the amount of time consumers spend on searching for product information and assessing products from rival brands (Z. Yang & Peterson, 2004).

In addition, when consumers are loyal to a particular brand, they tend to find it convenient to select a different channel provided by a store, such as online. This highlights the significance of customer loyalty as a key factor in determining the success of e-commerce (Dholakia et al., 2005; Reichheld and Schefter, 2000).

This study operationalize brand loyalty by examining how a consumer consistently purchases a brand that offers a seamless experience through cross channel integrated service across different channels during their purchasing process. It takes into account both the consumer's attitudes and behaviors towards brand loyalty (Leckie et al., 2018).

Brand loyalty is the state in which individuals have a strong and unwavering commitment to repeatedly purchase or support a chosen product or service in the future (R. L. Oliver, 1999). There are body of extant literatures that has found significant correlation between CPV and BL, for example, (S. Rahi & Ghani, 2016).

Further, who have a strong preference for a certain brand are more likely to develop a greater emotional tie to that brand (Keh et al., 2007). Prior research has corroborated a favorable correlation between BP and BL (Chaudhuri and Holbrook, 2001). Relationship between BP and BL is robust with prior having strong effect on the latter (Chinomona and Pooe, 2013; Keller, 2008).

1.2.11. Product category

The product category is crucial in comprehending customer behavior in a multichannel context and has thus been extensively examined from many angles in previous research. For instance, research conducted by Kaiser (2006), and Gentzkow (2007) has investigated the effects of adding new channels to current ones and found that the impact varies depending on the product categories.

Further, the focus on brand management has widened from the product brand to the service brand and the corporate brand. Thus, marketing practices may differ not only in different geographic and cultural settings, but also in different business sectors based on the product category and hence this thesis focused on multiple product categories within the consumer brands as suggested in the literature, for example, Alamro and Rowley (2011).

Moreover, there exists an extensive body of research that has examined product categories from several angles, including the distinction between search and experience products, utilitarian and hedonic products, and high and low participation products. These viewpoints shall be comprehensively analysed in the subsequent chapter.

1.2.12. Control Variables (CV)

A body of extant literatures suggest existence of the linear relationships between benefits / sacrifice and perceived value that might be contingent upon consumer characteristics, especially consumer demographics (CD), such as gender age, education, income, and family size (Eisend and Stokburger-Sauer, 2013; Fang et al., 2016; Reham, 2013; Shukla et al., 2013). This suggests the influential abilities of these characteristics in shaping customer perceived value for the cross channel integrated services offered by the brands and hence shall be controlled during the current study.

1.2.12.1. **Gender**

The gender of the respondents, coded as female or male. Involvement in purchase related activities by women is higher as compared with (Baltas, 2003; Chrisnntian Homburg and Giering, 2001). As per the body of literature, there is difference between men and women in a way they move in their purchase journey with women

have higher value for self-expression and exploration (Ailawadi, 2001); are more deal prone with higher sense of adventure and possess better market knowledge (Sherman and Deighton, 2001).

Further, females and males may have different need structures and decision models while embarking on a purchase journey (Z. Zhou et al., 2014). They may respond to the same kind of the benefits differently resulting in the difference in their perceived value, resulting in difference brand preference and loyalty behavior.

1.2.12.2. **Age**

The age of the consumers. The difference in perceiving value for the same attributes or benefits shall be based on the age because of difference in experience and adoption of the choice process, sophisticate (Sherman and Deighton, 2001) versus heuristics (Richardson et al., 1996); variety seeking, feel of time-pressure (Ailawadi, 2001); computer usage behaviour (Yoon and Occeña, 2015).

Hence, customers in their different age bracket shall have different brand preference and loyalty behaviour for the same kind of brand's services and offerings.

1.2.12.3. **Education**

This pertaining to the education level of consumers. The difference in the perceived value for the same kind of benefits shall also be based on the kind of education levels of the customers. Richardson et al., 1996 and Ailawadi, 2001 provided adequate evidence on the different preference behaviours between those with higher and lower education. This also works as surrogate measures for income levels (Richardson et al., 1996).

1.2.12.4. **Income**

The difference in perceived value for the same kind of offerings is also seen due to difference in the income (Richardson et al., 1996). Customers with lower income group demonstrate affinity towards private label brand and make more product comparison (Frank and Boyd Jr., 1965) against those with higher income tend to be convenience-oriented (Brown et al., 2007); more impulsive and demonstrate higher brand loyalty (Sivakumar & Raj, 1997; West et al., 1996).

1.2.12.5. **Family size:**

Family size is related to challenge in meeting-end-meets (Richardson et al., 1996). There is positive association between customers with big family size and private label brand proneness (Frank and Boyd Jr., 1965).

1.2.13. Single-brand versus multi-brand retailer – a clarification

The study defines 'brands' as Single Brand Retailer (SBR) that sells different product under one brand name like Starbucks, Ikea, Nike, Adidas, etc. It is different from Multi-Brand Retailer (MBR) that sells different products and different brands, and may sell private labels under one roof like Big Bazaar, Reliance, Shopper Stop, etc. Retail Channel Structure comprise of a retailer that sells products to consumers on behalf of the producer but does not produce. In this structure, journey of goods and services starts at 'manufacturer', and ends at 'consumers' through 'retailer'. With this brief, we intent to limit our study to SBR sometimes termed as 'National brands' or 'Manufacturer brands'.

1.3. Research Problem

Academia has kept pace with the dynamic, technology-driven environmental changes and has studied 'consumer channel choice' as prevalent in the market place on multichannel marketing_apart from various constructs like pricing, channel

cannibalization, service quality, brand loyalty, customer satisfaction, multichannel attribution, channel mix optimization, channel switching, customer experience, integration, coordination, synergies & (dis)synergies (Lazaris, 2014).

Taking supply-side perspective, a body of literature studied effect of cross channel integration on the shareholder value (Geyskens et al., 2002; Christian Homburg et al., 2014), store sales (Christian Homburg et al., 2014), firm performance (Xu et al., 2014), attaining economies of scale (Chaffey, 2010; Neslin et al., 2006), enhancing financial performance (C. Steinfield et al., 2002), and customer profitability (Gensler, Leeflang, et al., 2012). Further, there are studies like effect of channel elimination (Konuş et al., 2014) and effect of store channel additions for typical online sellers (Jill Avery et al., 2011), and establishing collaborative connections across multiple channels (Neslin et al., 2006).

While there is a decent amount of knowledge available on cross channel integration from supply-side perspective, much less is available from demand-side perspective that helps understand how consumers respond to it. Further, demand side perspective upholds the cross channel integration constructs for its being highly customer-oriented (Steinmann et al., 2016), as a means of customer management (M. Stone et al., 2002), transform consumers from channel A to B (Montoya-Weiss et al., 2003) and offering values to customers (Gulati and Garino, 2000) such as satisfaction enhancement (Montoya-Weiss et al., 2003) through seamless shopping experience (Goersch, 2002). Also, there are studies that has consider certain aspects of multi channel to understand consumers' search decision & purchase decision (Verhoef et al., 2007), channel adoption (Bilgicer et al., 2015), purchase behavior (Nierop et al., 2011; Wang et al., 2015), channel choice (Melis et al., 2015; Zhao and Deng, 2020), subsequent purchase behavior (Gong et al., 2015), preference (Kaczorowska-Spychalska, 2017), use (Hart, 2017), loyalty (Ansari et al., 2008;

Frasquet and Miquel, 2017; Ieva and Ziliani, 2017; Schramm-Klein et al., 2011), seamless shopping journey (Cocco and Demoulin, 2022).

Although some knowledge is available on consequence of certain scattered elements of multi channel on demand-side dimensions, there is limited knowledge on the impact of various drivers of cross channel integration strategy (Cao & Li, 2015) on it like perceived value, preference, and loyalty. Further, extant literature has examined some of the demand-side constructs such as purchase behavior (Wang et al., 2015), channel choice (Zhao and Deng, 2020), preference (Trenz et al., 2020), loyalty (Frasquet and Miquel, 2017), seamless shopping journey (Cocco and Demoulin, 2022), and brand experience (Massi et al., 2023).

Gao et al., 2019, suggests that there is a dearth of literature on 'customer experience' as major metric in multichannel environment, an essence on studying 'customer experience' as a value delivered to customers, and a need to study impact of integration of channels' resources beyond 'information'.

Zarantonello and Schmitt (2010) described "brand experience as customer subjective and internal responses, sensations, feelings, cognitions, and behavioural responses that occur during every consumer-brand interaction; searching, shopping, receiving, consuming and post-consumption services". Jocevski et al. (2019) provided various dimensions of seamless experience and categorized it based on three purchase stages; one that is linked to the prior to purchase (search and need), during the purchase is being made (payment and preference), and after the purchase has been made (request for service and usage).

A body of literature suggests that the 'experience' is a construct that customers perceive as a "value" in multi-channel environment are good shopping experience

(Alba et al., 1997; Balasubramanian et al., 2005); online shopping experience (Chen and Dubinsky, 2003); personalized customer experience (R. B. Kim et al., 2019); experience as a driver of emotional value element of CPV (Samuelsson & Andersson, 2019); customer experience (Grönroos & Voima, 2012; Helkkula, 2012). Further, Cao & Li, 2015 through measurement model of CCI, suggests integration beyond just 'information' to 'continuity of foundationals', 'rear-end system consolidation', and 'organization transfiguration'.

Ha and Perks (2005) showed relationship of brand experience to trust and future purchase intent. Also, "extending IT infrastructure and improving effectiveness of multichannel practices, unique brand image can be attained" (Weinberg et al., 2007), confirm brand association of multichannel.

To this end, few studies have examined brand level omnichannel integration, with the majority concentrating on retailer OC integration. This neglect of a brand's OC integration initiatives is a significant drawback because of the following:

Firstly, in a cross-channel integrated settings, clients have the ability to seamlessly transition between several channels, such as offline stores, online platforms, and mobile devices) while completing a single transaction (Kaczorowska-Spychalska, 2017) and can choose retailers with unique integrated channel assortments that suit their preference (Trenz et al., 2020). Due to the collective management of the channels, the apparent contact is not with the individual channel, but rather with the brand itself (Juaneda-Ayensa et al., 2016; Piotrowicz and Cuthbertson, 2019). Integration of channels allow customers to have the freedom of picking retailers, can be referred to as brands, that provide different combination of channels. This means that consumers no longer have to choose between online or offline channels, but can instead choose distinct combination of channels that meet their preferences

(Trenz et al., 2020). As a result, by permeating individual channels of sales, simultaneity is observed at every level of undertaken activities. That is why a consumer does not notice any differences between them. What they notice is only the brand and related experiences.

Secondly, in an online environment where consumers are more focused on quality and performance indicators, the brand's role becomes overly relevant to make up for the lack of in-person interaction (González-Benito et al., 2015).

Finally, previous literature suggests that, while the omnichannel is primarily a retail concept (e.g., Ailawadi & Farris, 2017; Verhoef et al., 2015), it can be extended to the manufacturers' brand; with certain roadblocks as in for retailers (Cui et al., 2021), and differentiated goals and challenges than those for retailers (Ailawadi, 2021). Therefore, it is crucial to concentrate on brand omnichannel strategy in order to comprehend how customer respond to omnichannel situations.

Manufacturer consumer brands are making serious efforts to embrace omni-channel status across their diverse channel partners, as evidenced by case studies such as TCNS clothing company (goodreturns.in, 2024), Parachute (retailtouchpoints.com, 2022), and Forever (apparelresources.com, 2022). Companies such as Movado (entrepreneur.com, 2021), a number of D2C companies like Zivame and Pepperfry (entrepreneur.com, 2023), even startups and small enterprises are embracing omnichannel marketing and recovering from the pandemic (entrepreneur.com, 2022). Hence, it's crucial to explore how these strategies impact customer attitudes and behavior towards the manufacturer-sponsored brand as much as for a multi-brand retailer.

So, to address the above literature suggestions and to address the gap, we examine the influence of the cross channel integration strategies of manufacturer-sponsor brands on a factors of perceived value & overall perceived value, and subsequently investigate their effect on customer brand preference, and brand loyalty in a retail channel structure or retail-value chain.

Further, as there is a limited knowledge on these demand-side dimensions in the context of the dual domain of brand and multichannel strategy like Baxendale et al. (2015), Sääksjärvi and Samiee (2011), we address the gap by conducting this study and propose to seek answers to the following neglected questions: (1) Does cross channel capabilities of manufacturer-sponsor brand contribute in shaping consumer preference & loyalty towards it in a retail channel structure? (2) To identify customer perceived value factors, which mediates the relationship of cross channel integration with brand preference and brand loyalty, (3) How consumer perceived value is associated with manufacturer-sponsor brands' cross channel integration capabilities and brand preference & brand loyalty in the same context? (4) Which customer perceived value dimensions has more bearing on the manufacturer-sponsor brand cross channel integration capabilities than others? (5) What specific areas (in terms of providing enhanced perceived value) can retailers and brands prioritize in order to improve consumer behavior, specifically in terms of influencing intra-stage customer decisions outcome in their favor? (6) How do four key dimensions (multichannel siloed retail-mix, integrated marketing communication, integrated consumer transaction, and organization-wide seamless integration) of brand cross channel integration capabilities configure to form pathways to brand loyalty? (7) Do all types of firms (CD vs FMCG) benefit from the common configurational path? (8) How do eight dimensions (multichannel presence, siloed retail-mix, integrated marketing communication, integrated consumer order fulfilment and information access, continuity of foundationals,

rear-end system consolidation, and organization transfiguration) of brand cross channel integration capabilities confirgure to form pathways to brand loyalty?

1.4. Research gaps, themes, aim, and objectives

To this end, the discussion and the literature review conducted on four major constructs of cross channel integration, customer perceived value, brand preference, and brand loyalty provided an insight on the gaps in the literature through generation of five themes, which are as below:

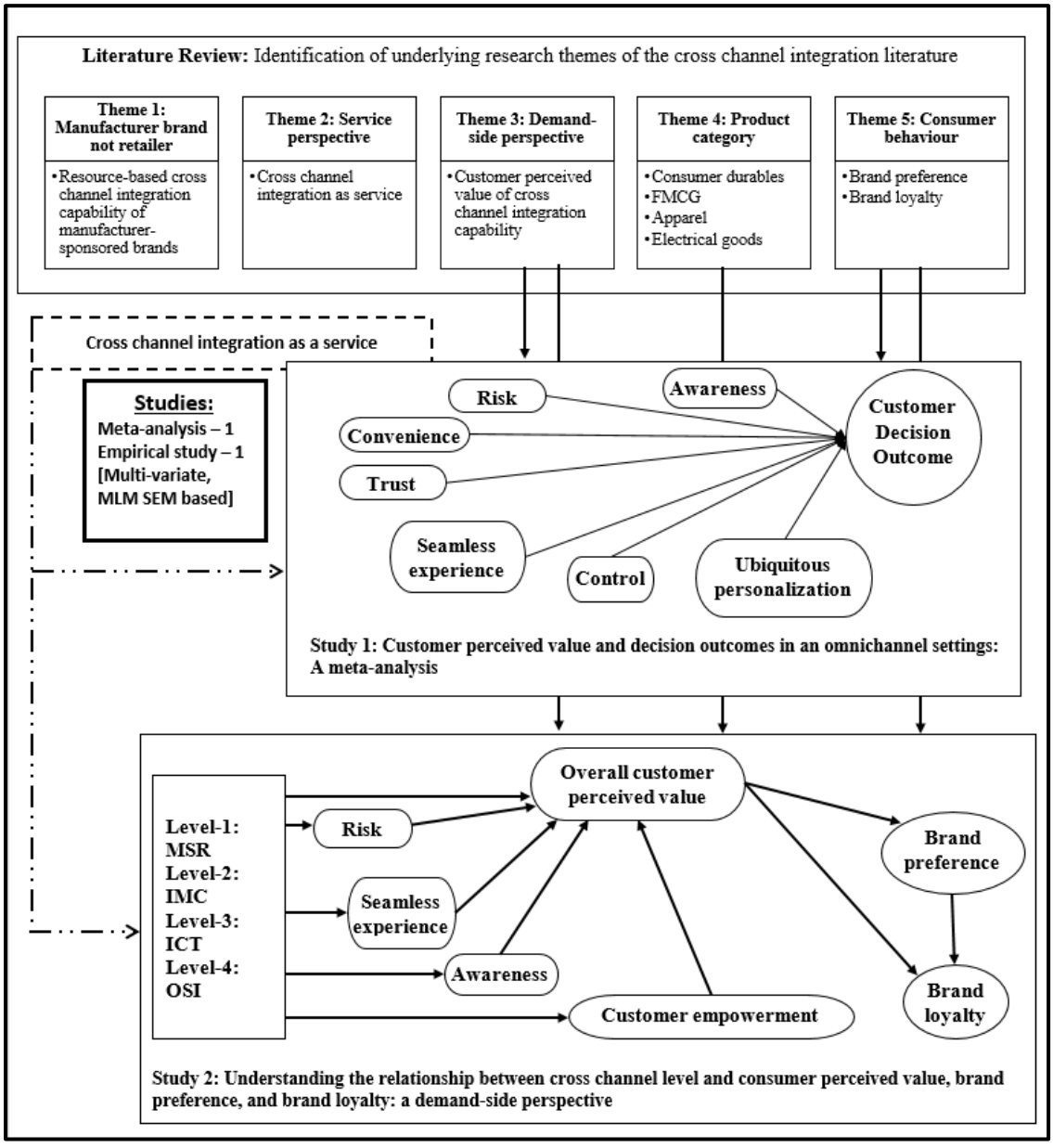
Theme 1: Manufacturer consumer brands:
Theme 2: Cross channel integration from service perspective
Theme 3: Demand-side perspective of the cross channel integration strategy of manufacturer brands
Theme 4: Diversified consumer product categories
Theme 5: Consumer behaviour included both brand preference and brand loyalty

This is further to the theme through which the literature such as Cakir et al. (2021) and Eriksson et al. (2022) acknowledges that achieving the cross channel integration is a process that is gradual and is transformational.

To address the gap in the literature centered around the above five themes, we conducted the two studies; one meta-analysis, and another empirical study. The gap, theme, aim and objective of these studies are represented in the figure 1.

1.4.1. Study 1: Customer Perceived Value and Decision Outcomes in an Omni-Channel settings: A meta-analysis.

Figure 1.1: Research gaps, themes, aims, and objectives of the thesis



1.4.1.1. Context of the study

Retailers are responding to the ever-changing patterns in customer behavior by often modifying and enhancing their methods of distributing products and services.

Retailers strive to improve their distribution and communication channels by actively aligning themselves with these trends, in order to enhance the shopping experience for customers.

This strategy has led to a progression from using a single channel (offline) to using multiple channels (offline and online separately) to achieving full connectivity across multiple channels (omni-channel). This has also introduced the concept of cross-channel integration, with multiple channels at one end of the continuum and full connectivity at the other end (Mirsch *et al.*, 2016).

1.4.1.2. Research gap:

With the rise in competitive pressure, it is becoming more difficult to attract new consumers (Sharrow, 2019). To address this challenge, prior research by Liu-Thompkins et al. (2022) recommends that merchants focus on improving their ability to convert existing customers into loyal ones. Nevertheless, according to industry research conducted by emarketer.com in 2021 and fortune.com in 2020, loyalty is diminishing and undergoing transformations. Reports from ketchum.com in 2020 indicate a 45% movement in brand choice, while mckinsey.com in 2020 reports a more significant 73% shift. The epidemic has revealed this fact, as customers easily changed their brand preferences and shopping channels (Adweek.com, 2020). Prior research has also emphasized the decrease in customer loyalty (socialmediatoday.com, 2013), the demise of brand loyalty (forbes.com, 2016), and the erosion of consumer loyalty due to technology (thelowdownblog.com, 2017). This highlights the need for retailers to extend their attention beyond only concentrating on the step of post-purchase decision-making. Loyalty, within this context, refers to the strong and unwavering commitment of customers to regularly repurchase or support a chosen product or service in the future, resulting in repeated purchases of the same brand (R. L. Oliver, 1999).

Retailers can also take into account the first phases of the decision-making process in order to more effectively cater to customers' demands at each level of the decision-making process (Lynch & Barnes, 2020). In addition, a study conducted in 2005 by the industry research firm Bain & Company examined 362 firms and determined that it is crucial to prioritize the value perceived by the consumer, rather than the views held by the business.

Further, the emerging body of literature on Omni-channels (OMC) / cross channel integration reveals a multitude of disparate aspects that have distinct effects on various customer behaviors. This emphasizes the need to promptly collect and combine these discoveries in order to offer practical and useful knowledge for professionals. These insights can help achieve the targeted consumer behavior results and successfully execute their tasks in the field.

1.4.1.3. Research question:

1. What factors of customer perceived value influences consumer behavior, in terms of intra-stge consumer decision outcome, when the retailers or brands operate through multichannel distribution strategy?

1.4.1.4. Objective:

1. The key purpose of this study is to conduct a comprehensive evaluation and analysis of previous studies to determine the components of customer perceived value (CPV) that have an impact on consumer choice outcomes (CDO) in a highly integrated cross-channel environment, also known as OMC. CDO, or customer Decision-making Process, encompasses the several stages in which a customer makes decisions during the purchasing process, including preference, intent, choice, purchase, usage, and loyalty.

2. By analyzing the antecedents of CDO along eight perceived dimensions of awareness, convenience, trust, control, risk, ubiquitous personalization, seamless experience, and overall CPV, the objective is to provide a systematic framework for understanding omnichannel CDOs in the today's marketplace.
3. To understand the relative impact of the different antecedents of CDOs in OMC context, either retailers or brands.
4. To provide a unified perspective to future researchers who wish to consider this important research domain.

1.4.1.5. Theme covered by this study:

This study incorporates two out of the five identified themes, demand-side perspective comprise of various factors of customer perceived value and overall customer perceived value alongwith consumer behaviour of brand preference and brand loyalty. It also incorporates various product categories of consumer durables, fast-moving consumer goods, apparel, and electronic goods.

1.4.2. Study 2:

Understanding the relationship between cross channel integration level (Brand Omnichannel transformational phase) and consumer perceived value, brand preference, and brand loyalty: a demand-side perspective.

1.4.2.1. Context of the study:

An all-encompassing framework for omnichannel transformation posits that it takes place gradually over four distinct stages (Cao and Li, 2015), with notable favorable results attained as firms progress through these stages (e.g. Zhao and Deng, 2020).

1.4.2.2. Research gap:

Research on the consequences of cross channel integration can be categorized into two main areas: supply side effects and demand side effects. Supply side effects include improvements in shareholder value (Christian Homburg et al., 2014), improving profitability (Gensler, Leeflang, et al., 2012). Demand side effects encompass changes in purchase behavior (Wang et al., 2015), channel choice (Zhao and Deng, 2020), preference (Trenz et al., 2020), loyalty (Frasquet and Miquel, 2017), seamless shopping journey (Cocco and Demoulin, 2022), brand experience (Massi et al., 2023). Nevertheless, the majority of these studies have mostly concentrated on the integration of cross channel capabilities at the retailer level, leaving limited research on cross channel integration at the brand level, which creates gap in the literature. The absence of emphasis on a brand's integration efforts for cross channel integration is a significant constraint for the following reasons:

Customers have the ability to switch between different channels during a transaction (Kaczorowska-Spychalska, 2017), and they can choose retailers that offer a variety of products that align with their preferences (Trenz et al., 2020). The interaction that customers perceive is not with a specific channel, but with the brand itself, as different channels are coordinated together in an online-to-offline environment (Juaneda-Ayensa et al., 2016; Piotrowicz and Cuthbertson, 2019). Furthermore, in an online context, the significance of the brand is greatly amplified in order to make up for the lack of face-to-face interaction (González-Benito et al., 2015), as customers place greater emphasis on the signs of excellence and product effectiveness. Therefore, it is crucial to prioritize the brand cross channel integration strategy in order to comprehend customer responses to the settings.

Moreover, there is increasing anecdotal evidence indicating that brands supported by manufacturers are consolidating their various retail chains in order to attain

omnichannel status. Case studies such as Nike (forbes.com, 2023), Unilever (consumergoods.com, 2022), and Hershey's exemplify the significant endeavors undertaken by companies to adopt omni-channel status across their many channel partners. It is essential to investigate the influence of these methods on customer attitudes and behavior towards the brand. It is equally important to examine customer responses to the organizational change initiatives of a manufacturer with a single brand as it is for a retailer with several brands.

1.4.2.3. Research questions:

2. To identify factors of customer perceived value that mediate the relationship of cross channel integration with brand preference and brand loyalty,
3. How consumer perceived value is associated with manufacturer-sponsor brands' cross channel integration capabilities and preference & loyalty in the same context?
4. Which dimension of customer perceived value has more bearing on the manufacturer-sponsor brand cross channel integration capabilities than others?
5. What specific areas (in terms of providing enhanced perceived value) can retailers and brands prioritize in order to improve consumer behavior, specifically in terms of influencing brand preference and brand loyalty in their favor?

1.4.2.4. Research objective:

5. To introduce the notion of cross channel integration of brands, which quantifies the extent of achievement by a manufacturer-sponsored brand in upgrading its channel services to an omni-channel standard. The model to mirror the steps of channel integration as conceptualized by Cao and Li (2015), but specifically for the scenario of a manufacturer-sponsored brand. The cross channel integration of brands' architecture inherently considers the perspective that organizational

change is a continuous process that occurs at various stages inside most businesses.

6. To uncover the immediate effects of a brand's omnichannel efforts by examining the intermediate variables that define consumers' perception of the brand's omnichannel transformational offering. By integrating Goersch's (2002) theoretical arguments with the Stimulus-Organism-Response framework, to understand the notion of CCI by conducting a comprehensive investigation on several brands, giving empirical evidence to back the findings
7. To examine the influence of CCI on consumer behavior throughout the evaluation (CPV), purchase (BP), and post-purchase phase (BL) of a consumer journey. This shall address the existing need to expand the knowledge in this field, as highlighted by Cocco and Demoulin, (2022) and (W. Gao et al., 2021) . This studyshall enhance the current knowledge by particularly examining the direct and indirect influence of CCI on customer behavior.

1.4.2.5. Theme covered by this study:

This study incorporates all the five identified themes, that is, manufacturer consumer brand studied and not multi-brands retailers, cross channel integration as service, demand-side perspective comprise of various factors of customer perceived value and overall customer perceived value alongwith consumer behaviour of brand preference and brand loyalty. It also incorporates various product categories of consumer durables, fast-moving consumer goods, apparel, and electronic goods.

1.5. Research Scope

Taking demand-side perspective, this study aims to understand the value of the manufacturer-sponsored brand cross-channel integration level as perceived by the consumer, and, in turn, its impact on both; brand preference and loyalty.

To achieve this aim, the scope of the study is to identify indicators that characterizes various different levels of cross-channel integration of manufacturer-sponsored (principal) brands in a retail-chain structure or a retail value chain. In addition, the study focuses on various manufacturer-sponsored consumer brands in various product categories that are in their transformational phase to become fully omnichannel and are in operational in an emerging market like India. Moreover, it focuses on identification of the factors of value that consumer perceive of brand cross-channel integration that leads to the brand preference, and brand loyalty at consumer-level.

1.6. Dissertation Organization

This study is structured into eight chapters, together with the references and appendices. This first chapter explores the research context, and gives an overview about the Cross-channel integration / Omni-channel, brand and branding, customer experience, customer perceived value, factors of customer perceived value, brand preference, brand loyalty, retail channel structure / retail value-chain. Next, it elucidates the research problem and establishes the research purpose and objectives that are essential for addressing the research questions. Ultimately, it establishes the boundaries and parameters of the investigation.

Chapter Two: builds the theoretical foundation of the research by reviewing the extant literature of omni-channel / cross channel integration / multi channel, customer perceived value, branding and consumer behaviour. This chapter discusses the concept of Omni-channel, customer perceived value, brand preferences and brand loyalty.

Chapter Three: discusses the meta-analysis study that systematically reviews and synthesizes findings from existing studies to identify customer perceived value

(CPV) factors that influences consumer decision outcome (CDO) within the highly cross channel integrated environment, alternatively referred to as OMC. CDO refers to an individual or summation of intra-stage decision made during a purchase-decision process of a consumer behavior including preference, intent, choice, purchase, use, and loyalty. This study presents a meta-analysis of the relationship between factors of CPV and CDO within OMC setting based on 94 relevant studies selected from 875 identified studies through searches limited till October, 2023 from 2000.

Chapter Four: this chapter discusses the theoretical background, conceptual and model development. Further, this chapter conceptually develops hypotheses on the relationships between cross-channel integration and various factors of CPV, and overall CPV. The hypotheses are also development on the relationships between CPV and consumer behaviour of preference and loyalty. This is done for the two empirical studies as discussed.

Chapter five: this chapter discusses research methodology adopted in the study. It starts with the discussion on the research philosophy, discusses deductive versus inductive approach, and the justification of the research approach adopted in this study. This further discusses research design, quantitative study, sample and procedure adopted, data collection from industry experts and consumers, and measures of the construct. This is done for both the empirical studies as discussed earlier.

Chapter Six: this chapter presents the data analysis and survey results for both the empirical studies. It starts with the validity of measures used in the study, inter-class correlations, endogeneity tests, descriptive statistics and bivariate correlation, effects of control variables. Further, this chapter aims to verify the modified model

and conduct hypothesis testing by comparing the results with previous research. It also seeks to justify the lack of significance in some correlations. Initial part of the data analysis is done through SPSS and AMOS, followed by the endogeneity test that is conducted using r-program. Further, due to nested data, MLM study is conducted using MPlus.program.

Chapter Seven: this chapter depicts the final validated updated model, and discusses the tested hypotheses by drawing a comparison of the results with previous research. It also provides a rationale for the lack of significance in some correlations. Also, this chapter conducts a detailed discussion on the non-significant relationship between CCI and risk and provide justification by comparing the results obtained in the earlier studies.

Chapter Eight: The last chapter presents a visual representation of the research contributions made at the theoretical, methodological, and managerial levels. Furthermore, this study addresses the originality of the research and also acknowledges its limits. Ultimately, the comments and recommendations for future initiatives are presented.

Chapter Two

Literature Review

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2.2.2. Physical channel

2.2.3. Online channel

2.2.4. Multi-channel

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2.2.8. Cross-channel integration definition

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2.1. Introduction

This chapter starts with the discussion on cross channel integration, which is the basic construct of the model development in this thesis. Section 3.2 discusses various terminologies around multichannel and discusses the same in details along with the clarification of the terms. This includes cross channel integration, single channel, physical channel, online channel, multi-channel, and omnichannel. Then we proceed ahead with the discussion on the transformational journey of a multichannel retailer or brands to omnichannel, followed by the current practices in omnichannel. We end the section 3.2 with the definition of the cross channel integration and its extension. Section 3.3 discusses resource-based view of cross channel integration, dimensions and operationalization of cross channel integration. Section 3.4 provides understanding of cross channel integration as a 'service'. Section 3.5, 3.6, and 3.7 provides understanding from the demand-side perspective of multi-channel, customer perceived value as a demand-side perspective, understanding various customer perceived value dimensions, respectively. Section 3.8 discusses brand preference, 3.9 discusses brand loyalty, section 3.10 discussion association between brand preference and brand loyalty. This is followed by the discussion around product category in the section 3.11, and methodology and theories adopted in the extant literature in the context of the multichannel is discussed in section 3.12. This section also includes discussion around SOR framework, which is deployed in this thesis. This is followed by the conclusion.

2.2. Cross channel integration

Organizations' channel strategies have evolved from mono-channel to multi-channel (MC), from siloed MC to fully-integrated omnichannel (OMC) by transformation process that passes through various degrees (phases) of cross-channel integration (CCI) (Mirsch et al., 2016). Cao and Li (2015) has defined CCI as "the degree to which a firm coordinates the objectives, design, & deployment of

its channels to create internal synergies & benefits to customers". MC is referred to a blending of mutually exclusive offline and online channels (Montoya-Weiss et al., 2003) like retail storefront, website, catalogue & promotional channels where they operates in silos. Verhoef et al. (2015) has defined omnichannel management as "the synergetic management of many available channels and customer touchpoints to optimize the customer experience across channels". As acknowledged by the literature, organizations gradually transform itself through various intermediate phases to attain omnichannel integration (Cakir et al., 2021; Lanlan Cao and Li, 2015; Cocco & Demoulin, 2022; Eriksson et al., 2022; Tyrväinen et al., 2020; Ye et al., 2018; J. Zhang et al., 2010), within the CCI continuum by starting at MC phase at one end and achieving OMC, on the other (Neslin et al., 2006).

The contact points that merchants use to connect with both existing and potential consumers are known as channels. Customers now interact with retailers in a variety of ways. Until recently, physical channels were the most reliable and important sales channel for merchants, according to Levy et al. (2013). While physical channels remain important, internet channels are experiencing greater growth due to technical developments. A store may set up and select from a number of channels to communicate and engage with its patrons:

In order to integrate and consolidate their many channels, a retailer must go through varying degrees of connectivity and integration procedures (Hübner, et al., 2016). Retailers that adopt a cross channel integration strategy grow their company beyond a single core channel to include a variety of channels (Brynjolfsson et al., 2013). Numerous variations have been created for sale through various channels. In practical usage, terms like "multi-channel," "omni-channel," "everywhere commerce," and "no-line commerce" are frequently used synonymously without

any discernible differences (Beck & Rygl, 2015). So, to develop as appreciation for cross channel integration, let’s discuss various other retail channel structure.

2.2.1. Single channel

Single channel retailing refers to a retail-value chain where sellers interact with customers exclusively through a single communication channel. Such a retailing's logistics system is also built around a single organization, which may be a purely physical store or an online retailer. Before 1995, there was no commercial use of the internet, therefore anyone who wanted to shop had to visit physical establishments or make an order through a catalog as those were the only options accessible. The US relaxed the stringent restriction and made the internet platform available for sale in the same year. Consequently, massive online merchants today like Amazon, eBay, and Alibaba were introduced at that time, and are currently controlling the retail industry.

2.2.2. Physical channel

The most conventional sales channel in a mono channel approach is physical shops. Although technology is advancing and sales channels are becoming more innovative, people still prefer to purchase new goods through physical channels since they may receive their purchases immediately. According to (Blazquez et al., 2014), it is also essential for creating fruitful customer relationships. In order to enhance the convenience, straightforwardness, and efficiency of the purchasing experience, physical stores must adopt new layouts as technology redefines the store experience. Examples of such layouts include "click and collect", "ordering in store", "ordering online, return to store", and other initiatives that span both online and physical retail channels (Bell, et al., 2014).

2.2.3. Online channel

Compared to their early years, online retailers have evolved to their maximum point now. The benefits that online shopping provides to both consumers and enterprises are what contribute to its success. With simply an internet connection, people can buy from anywhere at any time and from a considerably greater selection of items at lower rates from online shops, which greatly expands the market's potential. Consumers prefer using the internet as a means of shopping rather than going to physical stores, particularly because it allows them to save time, locate more affordable things, and access more comprehensive product information.

2.2.4. Multi-channel

According to Levy et al. (2013), multi-channel retailing involves using a variety of channels to offer clients goods and services. Essentially, customers interact with a firm across many channels and receive added convenience and assistance from a shop they already trust. Customers have the option to interact with a single company while looking for information, communicating, starting a purchase of a product or service, and making returns by using several channels. Furthermore, it provides a chance for businesses to provide more convenient customer service via several channels (Sands et al., 2010). According to (Palmatier et al., 2019), omnichannel channels integrate functions that enable customers to seamlessly engage in communication, search for products, and consume the brand across all channels. In contrast, multi-channel channels function as separate entities and operate relatively independently.

2.2.5. Omni-channel

The goal of omni-channel marketing, according to Rigby (2011), is to combine the benefits of traditional offline marketing with the rich internet experience. When a transaction happens across many channels, it is considered a real Omni-channel

experience. For instance, a consumer may purchase a product online and return it to a physical shop if they are unhappy, or they may order a product via an online channel and pick it up at a physical retail location (Rigby, 2011). According to Ayensa et al. (2016), the term "Omnis" in Latin means "for all" or "universal," so the definition of Omni is "all channels together." Regardless of the channel a consumer chooses, omni-channel retail has a customer-centered approach and offers a comprehensive purchasing experience (Gupta et al., 2004; Shah et al., 2006). In an omni-channel world, Payne et al. (2017) claim that customers connect with brands rather than channels. Omni channel management is the "synergetic management of the numerous available channels and customer touch points in such a way that the customer experience across channels and the performance over channels is optimized", according to Verhoef et al. (2015) in the context of customer relationship maximization.

The internet has completely changed our life, which is why we have Omni Channel. A Californian named Samuel (an alias) went to a real shop to look for shoes, but he was unable to discover anything intriguing. The shop manager arrived to show him some more inventory on an iPad as he was leaving the establishment. Samuel chose to preorder a new, attractive shoe that would be arriving at the shop the next week after spending some time browsing, looking through internet specials, reading reviews, and comparing pricing. More examples are provided below:

Grainger is starting to build on their omni-channel efforts using their mobile application that allows customers to browse available products at the closest branch location to them

- When customers signs into their account online and make a purchase or adjust a cart, those changes gets reflected in the mobile app too

- This leads to a seamless experience where consumers' content and actions transfer from platform to platform. No matter *how* or *where* a customer interacts, the shopping experience is the same.

Macy, established in 1858, is an iconic retailing brand with nearly 800 stores operating coast-to-coast and online at macys.com. Macy's offers powerful assortments of the best brands, tailored to each and every customers' requirement with obvious; value, engaging service and unforgettable moments. Its famous flagship located at Herald Square in New York City is known as the "World's Largest Store," with over 1.1 million square feet of retail space. Macy's has a clear vision to help customers shop anywhere, anytime, and anyhow they choose by leveraging the entire inventory of the company to satisfy demand. Macy's executes on its corporate strategy dubbed M.O.M. "My Macy's merchandise assortments, Omni-channel integration, and Magic Selling customer engagement". Customized their inventory management — upgrade traditional tool RFID to executive strategy of "Pick to the Last Unit" (P2LU) in 2015 as a turnaround strategy after initial setback in 2013 triggered by 'underestimating Inventory Management'.

These and other examples show how the internet is redefining retailing by allowing businesses to engage with customers through a variety of touchpoints and channels and provide them with online content that resembles offline sensory information (Brynjolfsson et al., 2013). The utilization of several channels exemplifies the idea of Omni-channel, which allows customers to freely navigate between online, mobile, and physical channels within a single, seamless transaction process (Rosenblum & Kilcourse, 2013).

In the past, traditional brick and mortar retail stores were unique in that they offered services like letting customers handle and feel the product in person and delivering

instant satisfaction. In the meantime, new online retailers, or e-retailers, are attempting to offer a large selection of goods at competitive prices and furnishing customers with content like ratings, reviews, and customer feedback. The advent of the internet has caused the retail sector to change toward seamless omni-channel retailing, which eliminates the need to distinguish between physical and online retail channels and transforms the whole planet into a wall-free showroom (Brynjolfsson, et al., 2013). As the retail sector transitions to an omni-channel concierge model, it will be more customer-focused than transactional and delivery-focused. For instance, virtual reality will be added to actual retail locations and accessed via smartphones and other gadgets like Google Glass and wearables. This will change the face of the retail sector going forward. Retailers and their supply chain partners will need to rethink their competitive strategies and develop original, cutting-edge ideas in order to attain higher customer value as Omni-channel retail dissolves geographical barriers and customer ignorance (Brynjolfsson, et al., 2013).

2.2.6. From multi-channel to omni-channel

The introduction of the internet channel and further digitization have altered conventional commerce from previous decades. Digitalization and the rise of online channels have been seen as disruptive developments and have grown very dominant in some retail marketplaces (Christensen et al., 2013). The majority of the retail company models have been impacted, according to Sorescu et al. (2011), by changes in their retail mix that drive their consumers to start acting badly. In response to this trend, the store has launched new initiatives. To begin, they are implementing multi-channel strategies, with a primary emphasis on determining whether or not to add additional channels to the mix of channels already in place (Geyskens et al., 2002). Neslin, et al. (2006) suggested that the design, deployment, coordination, and assessment of channels to maximize customer value via efficient customer acquisition, retention, and development is the definition of multi-channel.

According to this concept (Neslin, et al., 2006), channels are touchpoints or the points of contact where a company interacts with its clients. The retail industry made US$ 22.6 trillion in sales in 2015, which accounted for 32% of the world's gross domestic product. This demonstrates the sector's substantial impact on the global economy.

Because the retail sector is always changing and undergoing major upheaval, merchants must adjust to these changes in order to survive. The past twenty years have seen a significant shift of the retail sector thanks to the internet, mostly due to the introduction of new channels made feasible by these technological advancements and the internet (Verhoef et al., 2015). The internet had a major role in the emergence of online merchants such as Amazon, eBay, Alibaba, and others, which completely changed the old brick and mortar shop model. Retailers begin to add internet channels to their current model and change it to a multi-channel approach in order to diversify their channel mix (Pentina et al., 2009). When using a multi-channel approach, the majority of retailers run their various channels independently and follow a typical organizational structure of silos (Gallino & Moreno, 2014; Rigby, 2011). When it comes to multi-channel retail, retailers usually compare their individual channels (Min & Wolfinbarger, 2005). Based on these comparisons, they examine how changing the channels in their mix will affect their business's various aspects from a customer's point of view (Avery et al., 2012) while improving their own performance. Due to the availability of several channels, consumers more often do in-store product searches before making an online purchase, or vice versa, increasing industry competitiveness (Balakrishnan et al., 2014). Retailers must include more channels in their retail mix to survive in the market as a result of the increased competition (Bernstein et al., 2008). In order to improve the client purchasing experience, it has become more necessary to connect the additional channels into a single, seamless channel. The omni-channel idea was

developed to combine channels. All of these channels are combined into a single, seamless channel with omni-channel technology (von Briel, 2018). Customers' purchasing habits and brand loyalty are transformed by omni-channel retail (J. Zhang et al., 2010), providing them more flexibility when they purchase. Consumers currently use many channels to communicate with retailers (Sorescu et al., 2011), and they are becoming more and more expecting from these channels to "talk to" one another and work together to provide a seamless shopping experience (R. Hansen & Sia, 2015). The omni-channel approach involves the integration and joint operation of all the channels, supporting each other's sales. Compared to multi-channel shopping, where each channel functions independently and does not support one another's sales, omni-channel shopping offers consumers a smooth and cohesive experience. Compared to multi- or single-channel strategies, omni-channel strategies allow clients to transition between channels with ease. Because it takes less work to switch channels in omni-channel retail, customers are happier than in conventional retail and are more devoted to the brand or store. Customers now have the ability to create a shopping list well ahead of time, allowing them to share it with others to receive input on the items. They can also organize the list and potentially receive customized coupons. Additionally, they can receive comments regarding specific nutrition information or dietary needs, as well as information on the quantity of items required to complete a recipe, among other features. They can then use this list as the foundation for a fresh order (Scott & Scott, 2008). This cooperative effort amongst friends and family may significantly boost convenience regardless of the preferred medium.

2.2.7. Cross-channel current practices

Customers demand a smooth omni-channel shopping experience that allows them to customize the purchasing process to suit their requirements and tastes. Businesses that use a variety of channels are using these channels to provide a

comprehensive shopping experience. Businesses who implement an omni-channel strategy see an 89 percent increase in client acquisition compared to those with a weak omni-channel presence (Braaten, 2018). Below is an examination of omni-channel methods used by the top and most innovative brands that use this approach.

2.2.7.1. *Amazon*

Amazon is adopting a customer-centric strategy very rapidly. Amazon has created individualized and responsive interactions across all channels by putting a strong emphasis on consumer preferences. By expanding their channels, they link consumer data to the central fulfillment warehouse and consolidate all of their channels. These data consist of consumer behavior, past purchases, and demographic information. Amazon introduces Amazon Prime, a service that guarantees same-day goods delivery. Another handy way that Amazon makes it easy for customers to place orders and have their products delivered to their doorstep within two days is via Amazon Alexa, which is available with Amazon Prime. Amazon's shipping is speedier, which makes its supply chain more responsive and nimbler. Nevertheless, despite its status as the largest retailer, Amazon has become deeply embedded in the lives of its users and offers an indispensable service that fulfills their universal needs.

In order to collect data and combine it across all channels, Amazon also employed a data unification technique. Amazon Prime Membership enables the consolidation of data. Amazon offers many additional benefits with its premium membership, such as complimentary music, free movie streaming, exclusive wardrobe access, and exclusive deals, in addition to its expedited delivery promise. Prime Wardrobe, offered by Amazon, enables shoppers to evaluate things before to purchasing them. Data unification is a crucial element of the omni-channel strategy, and Amazon has an edge in this area due to the consolidation of all its services into a single, coherent

program called "Amazon Prime." Amazon's integrated service model allows it to understand and recognize user preferences and purchasing intentions, enabling it to offer them the highly desired suggestions they want.

2.2.7.2. *Macy*

Founded in 1858, Macy's is a 161-year-old department store in the United States. As technology advanced and began to alter the conventional retail industry, Macy's was the first to create an e-commerce sales platform and introduce Macys.com as a website in 1998. Macy was founded on a conventional brick and mortar business prior to then. Before launching an online store, Macy's realized that having an online presence alone would not be sufficient to compete with rivals. Macy's has redesigned its core business model to go from a physical and mortar shop to a fully digitally hybrid approach. Macy's unveiled their entire omni-channel strategy in 2010 by establishing a seamless integration between their online and physical channels, aiming to enhance the overall shopping experience for consumers.

In 2016, Macy's initiated the "Ship from Store" concept, wherein they use their 868 physical stores as fulfillment and distribution sites for online purchases. Macy's enhances both their customer experience and inventory management at the same time with this program. As it is expected to have efficient inventory accessible in the physical shops, Macy's begins executing orders received through the online channels from the inventory of the offline stores rather than maintaining new inventory for the online purchases, minimizing the cost of inventory holding. In addition, instead of delivering from the centralized distribution center, they provide their consumers with a faster delivery from the nearby physical shop. Additionally, Macy's serves internet clients via "buy online and pick up in-store", bridging the gap between its physical and virtual stores. Consumers profit from the simplicity and convenience of having their orders fulfilled, and Macy's gains from the

additional purchases those consumers bring in at the physical shop. Moreover, Macy's uses radio frequency identification (RFID) technology to pinpoint a product's exact position inside their supply chain or shop, which is crucial for completing the "ship from store" and "buy online and pick up in-store" initiatives. Macy's use RFID technology to accurately manage inventories while providing excellent customer service and satisfying customer's transactions.

Additionally, Macy's launched a localization effort program based on the Omni channel, allowing consumers to pre-select what is offered in-store. Macy's leverages their dedication to improving the shopping experience for customers by using both their internet website and mobile application. The comprehensive floor layouts of each store are shown by Macy's using Google Map 6.0, which is integrated into the Macy's mobile app. Customers can then navigate shops, locate items, and sign up for discounts with the aid of the app. The goal of Macy's program is to combine retail and internet channels into one cohesive strategy. By making a product visible to customers before they arrive at the business, it provides value to the consumer. Furthermore, it helps shop associates discover items quickly, confirm system-wide product availability, and guarantee on-time delivery or customer pick-up the next day.

2.2.7.3. *Disney*

Disney's app is one of the best examples of a full-fledged omni-channel experience

- Disney's various customer touchpoints are so interconnected that the user experience never ends.
- One don't buy a ticket online, show up at the park, and take a gamble on lining up anymore.
- Now, one can buy a ticket, download the app, scan Fastpasses, check ride times, and explore customized content before even setting foot in the park.

- Once customer is at the park, she can locate Disney characters on a live, interactive map.
- Customer can get their picture taken at the store, have it show up on the app, and purchase when one gets home.
- The entire experience is a never-ending sensory overload of the Disney brand that contains one critical factor: Consistent, seamless integration.
- Everything carries over to the next platform and connects to the last.

2.2.8. Cross-channel integration definition

Cross channel integration has been studied in the literature by using various constructs such as multi-channel, multi-channel integration, omnichannel. In marketing literature, there are numerous definitions for these constructs.

Cross Channel Integration is defined as "the degree to which a firm coordinates the objectives, design, & deployment of its channels to create internal synergies & benefits to customers" (Cao & Li, 2015). MC is a blending of mutually exclusive offline and online channels (Montoya-Weiss et al., 2003) like retail storefront, website, catalogue & promotional channels where they operates in silos. OMC is a strategy where communication channels & supporting resources cooperate to achieve improved user experience & relationships. Verhoef et al. (2015) defined omnichannel management as "the synergetic management of many available channels and customer touchpoints to optimize the customer experience across channels". However, Cross-channel is often used interchangeably with multichannel or omni-channel (Noble et al., 2009). According to Beck and Rygl (2015) and Levy et al. (2013), the three concepts in the taxonomy, namely Multi-, Cross-, and Omni-Channel Retailing, are defined as follows.

Multi-Channel Retailing refers to the process of selling products or services across several channels, including all commonly used channels. In this approach, the consumer is unable to initiate contact between channels, and the retailer does not have control over the integration of these channels. A Multi-Channel Retailer is a business that offers products or services over several channels, including all commonly used channels. In this case, the consumer is unable to initiate contact across channels, and the retailer does not have control over the integration of these channels.

Cross-Channel Retailing refers to the process of selling products or services over several channels, including all commonly used channels. This allows customers to engage with different channels to make purchases, while the retailer maintains control over the integration of these channels. A Cross-Channel Retailer is a business that offers goods or services across several channels, including all popular channels. This allows customers to engage with different channels to make purchases, and the retailer has control over integrating these channels.

Omni-Channel Retailing refers to the comprehensive process of selling products or services across several popular channels, allowing customers to engage with all channels and enabling retailers to seamlessly integrate all channels. An Omni-Channel Retailer is a business that offers products or services across many channels, allowing customers to engage with the business across all channels and enabling the retailer to seamlessly integrate all channels.

This also suggests that CCI as a continuum with MC on one end with completed siloed channels and OMC with completely integrated channels, on the other.

Previous literature provides several definitions for omnichannel (e.g., Akter et al., 2021; Juaneda-Ayensa et al., 2016; Saghiri et al., 2017), multichannel retailing (e.g., Lewis et al., 2014; Montoya-Weiss et al., 2003; Neslin et al., 2006), multichannel integration (e.g., Bendoly et al., 2005; Tate et al., 2004), cross-channel integration (e.g., Cao & Li, 2015; Chatterjee, 2010). Common theme of these varied definitions are their attributes in making suggestions for the enhancement of the organizational capabilities such that their performance enhances along with attainment of the seamless experience for customers. Key focus area of these definitions is provided in the below table 2.1.

Table 2.1: Definition of different construct used in the context of multichannel

Construct	Author	Definition	Focus area
Omnichannel retailing	Rigby (2011)	Omnichannel refers to a unified sales experience that combines the benefits of brick-and-mortar establishments with the information-rich nature of internet purchasing	Establishes connect between offline store and information-enabled online channel for experience
	Brynjolfsson et al. (2013)	With the evolution of the retailing business towards a seamless "omnichannel retailing" experience, the boundaries between physical and online shopping will disappear, transforming the globe into a boundary-less showroom	Acknowledges the vanishing boundaries between channels for seamless experience
	Frazer and Stiehler (2014)	Omnichannel refers to a cohesive shopping experience that combines the actual store with digital information	Recognizes connect between offline store and information for experience
	Verhoef et al. (2015)	Omnichannel refers to the strategic management of several channels and customer touchpoints to enhance the customer experience and maximize performance across these channels	Channel management capability enhancement for organizational performance and experience for customer

	Juaneda-Ayensa et al. (2016)	Omnichannel behavior encompasses the utilization of both physical and digital channels to provide consumers with seamless purchasing experiences. By implementing an omnichannel strategy, customers are empowered to make purchases through various channels, regardless of their location or the time of day. This method offers buyers a distinctive, comprehensive, and smooth purchasing experience that eliminates the obstacles across different channels	Capability development to provide ubiquitous presence of a synchronized and personalized multiple channels for attainment of a customer seamless experience
	Akter et al. (2021)	Omnichannel marketing refers to the strategic approach taken by managers to adapt their service delivery in order to meet the demands of a technologically connected client. Customers that are connected frequently engage with many channels simultaneously while making purchasing decisions . . . Omnichannel marketing integrates all available channels to provide a smooth and uniform consumer experience over the whole purchasing journey. Omnichannel refers to more than just the simultaneous usage of several channels. It encompasses the integration of all possible channels inside a company. The fundamental aspect of the omnichannel concept is the integration or seamless experience	Development of a capability that provides consistent and seamless experience to an ever-connected, multi-channel traveling shopper
	Beck and Rygl (2015)	The process of selling products or services through several channels, allowing customers to fully engage with the channel and/or enabling retailers to have complete control over channel integration	Development of capability to control channel integration, triggering customers leverage them

	Saghiri et al. (2017)	The omnichannel refers to a comprehensive perspective that encompasses all channels available to both consumers and members of the supply chain, wherein consumers have the ability to seamlessly transition between different channels during their shopping journey. They can locate a product on one channel, such as the manufacturer's website, make a purchase through another channel, such as an online retailer, and have the product delivered from a third channel, such as home delivery.	Capabilities that lead customer to feel interacting with one unified channel, which traveling across multiple channels
	Lewis et al. (2014)	Omnichannel is a retail approach that involves the use of several interconnected channels to offer items and services to customers	Deployment of a two or more integrated channels for selling products or services to customers
	Piotrowicz and Cuthbertson (Piotrowicz & Cuthbertson, 2014)	Typically, omnibus commerce prioritizes customer-brand connection more than the specific sales channel. This necessitates an emphasis on mobile and social networks, as well as catering to the diverse demands of customers	Mobilization and unification of mobiles and social media channels for customer-brand interaction to attain customer needs

Cross- channel retailing	Chatterjee (2010)	Enables the integration of numerous channels to facilitate the transfer of items, money, and information across different channels	Products, money, and information movement between customer and retailers/brands through integrated channel
	Heitz-Spahn (2013)	Cross-channel free-riding refers to the behavior of consumers who utilize one retailer's channel to research and plan a purchase, but ultimately make the purchase through another retailer's channel	Capability enhancement to offer interconnected channels for uninterrupted movement across channel through the customer purchase journey
	Cao (2014)	Cross-channel integration refers to the retailer's decision to adopt strategies that aim to meet consumers' expectations of a smooth shopping experience, despite facing competition	Develop competitive advantage strategy to meet customer's seamless shopping experience needs
	Cao and Li (2015)	Cross-channel integration refers to the extent to which a company aligns its channels in terms of goals, design, and implementation to generate synergies and provide specific advantages to its customers	Through the continuum from low to high, development resource-based organizational capabilities to create synergies through coordinates objectives, design and deployment of its channels and attain customer benefits
Integrated multi-channel retailing	Berman and Thelen (2004)	Consumers perceive the business as a unified retail organization with several distribution options that work well together in a multi-channel approach	Complementing multiple channels to manifests into single entity for consumers
	Payne and Frow (2004)	Multichannel integration refers to the strategic utilization of all economically viable channels to cater to clients, while ensuring seamless integration without any attempt to influence the customer's preferred channel of communication	Offers integrated channel to consumers with flexibility, and control of using them as required

	Tate et al. (2005)	Multichannel integration pertains to the extent to which channels within a multi-channel environment, such as marketing, finance, and logistics divisions, share shared organizational resources.	Degree of pulling common resources across organizational functions by channels
	Bendoly et al. (2005)	Multichannel integration refers to the strategic use of several methods of order fulfillment to provide mutual assistance or interchangeable options for end-customers' transactions	Multi-modal, mutual support fulfillment, interchangeable transactional alternatives offered to the customer
	Yan et al. (2010)	Multichannel integration refers to the degree of interaction and cooperation between online and conventional channels, as well as their collaboration with advertising and marketing efforts	Degree of interaction between channels, and its cooperation with advertisement and promotion
	Chiu et al. (2011)	Multichannel integration refers to the reciprocal reinforcement or interchangeability of online and offline channels	Online/office interchangeability
	Herhausen et al. (2015)	Online-offline channel integration (OI) refers to the process of incorporating access to and information about the offline channel into an online channel	Providing access and knowledge of offline channel to online consumers
Multi- channel retailing	Stone et al. (2002)	Multichannel refers to a distribution strategy that involves using multiple selling channels or mediums, such as the internet, television, and retail outlets, to serve customers. Multi-channel customer management, on the other hand, involves using more than one channel or medium to effectively and consistently manage customers across all the channels or media used	Distribution to and management of customers through various available channels

	Montoya-Weiss et al. (2003)	The primary goal of a multi-channel service provider is to allocate resources across several channels in order to meet client needs and optimize financial gains	Optimize distribution of resources across various channels for customer satisfaction and maximization of profit
	Neslin et al. (2006)	Multichannel refers to the strategic management of several channels that provide interaction between companies and consumers. The objective is to improve customer value by effectively acquiring, retaining, and developing customers	Customer value enhancement through customer-retailer interacting channel, by its design, deployment, coordination, and evaluation
	Chatterjee (2010)	The concept involves the operation of many channels as separate entities	Siloed multiple channel operation
	Frazer and Stiehler (2018)	"Multichannel" refers to a situation where many shopping channels are still being run separately and independently	Siloed multiple channel operation

2.3. Resource-based view of cross channel integration strategy

2.3.1. Dimensions and operationalization of cross channel integration

Extant literature provides guidance on the omnichannel dimensions such as integrated branding, and mutual-channel cross promotion (Goersch, 2002), cross-channel shopping, and physical integration (D. R. Bell et al., 2014), fore-end and rear-end organizational processes (Sousa and Voss, 2006), organizational structure (Zhang et al., 2010), assortment alignment (Y. Pan & Zinkhan, 2006), informational integration (Bendoly et al., 2005), reciprocity (H. H. Lee & Kim, 2010), products collaboration, price collaboration, sale promotional collaboration, service and distribution collaboration (Xiaoxia Chen et al., 2022), channel service configuration, content and process consistency, and assurance of quality (Hossain et al., 2020).

The study provides guidance on the criteria against each dimension to guide retailers and brands on their OMC capabilities. Existing literature has studied various dimensions of OMC, which is enlisted in the Table 2.2 along with factors, theories, and OMC dimensions studied.

The assessment of channel integrationness has been limited to certain specific dimensions (Oh et al., 2012; Schramm-Klein and Morschett, 2005), the gap that was filled by the advent of the Cao and Li (2015) model. Cao and Li, 2015 provided the most comprehensive set of dimensions that reflect several cross channel integration levels that the organization adopt and implement during their omnichannel transformation journey.

Table 2.2: Prior studies on dimensions of cross-channel integration

Study	OMC capabilities dimensions	Factor studied	Underlying theories
Kuruzovich et al., (2008)	Online information retrieval	Price information retrieval, search effort, referred purchase	Need fulfillment theory
Kleinlercher et al. (2020)	Price and assortment	Involvement, convenience, time savings, online/physical store shopping experience, assortment attractiveness, webrooming, purchase	Anticipated utility theory
Kim et al. (2017)	Buy-Online, Pickup In-Store	Perceived Risk, Convenience (location), Product involvement, Intention to adopt and use BOPS	Diffusion-of-Innovations (DOI) theory
Lee (2020)	Integrated promotion, transactional information, product & pricing Information, information access, order fulfilment, customer service	Perceived convenience, customer satisfaction, intention to re-visit OMC	Nil
Le & Nguyen-Le (2020)	"Channel-service configuration", "integrated interaction"	Empowerment, experience, trust, variety-seeking, patronage intention	stimulus-organism-response (SOR) framework
Mishra et al. (2022)	"Alignment of fundamentals", and "Back-end system centralization"	Customer empowerment, satisfaction, unreliability (risk & trust), consumer retention	stimulus-organism-response (SOR) framework
Goraya et al., (2022)	consistent brand promotions and advertisements, consistent product and price, inventory information, promotion	perceived empowerment, perceived assortment structure, perceived benefits	Self-determination theory

	integration, collect, return, repair, or exchange integration		
Xiaoxia Chen et al. (Xiaoxia Chen et al., 2022)	Products collaboration (PROC), Price collaboration (PRC), Sale promotional collaboration (SPC), Service and distribution collaboration (SDC)	Experience, loyalty	stimulus-organism-response (SOR) framework
Sun et al. (2020)	Mobile identity, integration quality, channel service transparency, channel choices breadth, content & process consistency	satisfaction, Omni channel self-efficacy, Mobile identity, utilization of OMC service	Social cognitive theory (SCT)
Swoboda & Fränzel (2022)	Pre-purchase integration involves providing information, services, or promotions for stage-specific behaviors like need recognition, information search, or evaluation. Purchase integration involves transaction or product information, order fulfillment, or services for stage-specific behaviors like identifying alternatives, choosing, and ordering. Re-purchase - information (depending upon its accessibility and relative diagnosticity)	Quality of OMC retailer quality, experience of carrying out online shopping, pre-purchase, purchase	Accessibility-diagnosticity theory
Min Zhang et al. (2018)	Integration of product, price, and promotion	psychological distance and perceived uncertainty, purchase intention	SOR framework
Cattapan & Pongsakornrungsilp (2022)	Integration of product, price, transaction information, information access, fulfilment of order, and customer service	perceived risk, customer satisfaction, purchase intention	SOR framework

Pham & Ahammad (2017)	Responsiveness to customer satisfaction, Order fulfilment,	Information pertaining to product, Ease-of-use, security assurance, customization, internet site demeanor, order fulfilment, ease-of-return, ease of check out, customer satisfaction,	Procedural justice theory
Hossain et al. (2020)	Channel service combination, consistency of content and processes, and assurance of quality	Channel service combination, uniformity of content and processes, quality ensurement, cross buying intention	Dynamic capabilities theory
Chai & Wang (2022)	Openness in channel-related services, Width of channel-related choice, uniformity in content and process	Perceived usefulness, sustained utilization intention	Technology Acceptance Mode (TAM)
Mishra et al. (2022)	Information & promotion integration, BOPS, post-purchase service integration, inventory status	consumer empowerment and satisfaction, consumer patronage intention	Consumer empowerment theory
K. Kim et al. (2020)	Buy-Online-Pick-Up-In-Store Service (BOPIS)	Performance expectancy, influene of social, BOPIS-compatible shopping, hedonic motivation, price value, trust, behavioural intention and use	the unified theory of acceptance and use of technology model

Cao and Li (2015) has defined various dimensions of cross channel integration and categorized it into 4-leveled continuum. The matrix comprising of dimensions and levels is tabulated below (abbreviation meaning is provided in 'Notes', following these tabulations):

Table 2.3: Dimensions of cross-channel integration as per Cao and Li (2015)

Cross-Channel Integration Stage	Presence in Different Channels	Retail Mix Integration Policy								Marketing Communication Integration		Integration of Consumer Order Fulfilment						Integration of Consumer Information Access					
		Pricing		Brands		Assortment		Service				Click & pick-up in Store		Click-to-call		Buy online and return in-store		Online Inventory & Order status		Browsing Inventory in-store		Store & Mobile App	
		S	D	S	D	S	D	S	D	Con.	Non-Con.	Yes	No	Yes	No	Yes	No	Acc.	No-Acc.	Alwd.	Not Alwd.	Likd	Not-Lnkd
Level-1	√		√		√		√		√														
Level-2	√			√						√													
Level-3	√											√		√		√		√		√		√	
Level-4	√																						

Cross-Channel Integration Stage	Alignment of fundamentals									
	Pricing		Promotion		Loyalty		Assortment		Service	
	Algn	Not Algn	Algn	Not Algn	Algn	Not Algn	Algn	Not Algn	Algn	Not Algn
Level-1										
Level-2										
Level-3										
Level-4	√		√		√		√		√	

Cross-Channel Integration Stage	Centralization of Back-end system												Organization Transformation							
	Merchandize Planning System		Logistics		Information System		Call Center service		Service		Database of clients		Knowledge		Recruiting Multi-Skilled Employees		Organizational Structure		Incentive Schemes	
	Int.	Not-Int.	Int.	Not-Int.	Int.	Not-Int.	Int.	Not-Int.	Int.	Not-Int.	Int.	Not-Int.	Srng	Not Srng	Yes	No	Algn	Not Algn	Inclv	Not Inclv
Level-1																				
Level-2																				
Level-3																				
Level-4	√		√		√		√		√		√		√		√		√		√	

Note:

S – Same, D – Different, Con. – Consistence, Acc. – Access, Alwd. – Allowed, Lnkd – Linked, Algn – Aligned, Int. – Integrated, Srng – Sharing, Inclv - Inclusive

Categorized levels in cross channel integration continuum has been operationalized as per below definition and philosophy. Boundary conditions matching these levels has been mentioned against it. Table 2.4 provided details on the operationalization of cross-channel integration

Table 2.4: Operationalization of cross-channel integration

CCI Stage	General Category	Definition - Category	Summary
Level-1	Fully siloed channels	Retailers engage in the sale of products or services across several channels, while maintaining separate operations for each channel	Retail Mix Integration Policy (Price, Brands, Assortment & Services) Not met
Level-2	Optimization through collaborative communication	Retailers strategically enhance existing channels, working together to prioritize operations related to marketing engagement with customers	Retail Mix Integration Policy of "Brands" matches and "Marketing communication Integrated"
Level-3	Optimization through collaborative transactions with customers	Retailers engage in collaborative optimization of their established channels, with a specific focus on operations directly related to consumer transactions	Consumer Order integration, Consumer Information
Level-4	Collaborative Optimization through Seamless Shopping Experience'	Retailers collaborate to improve their established channels, with a focus on operations that are directly related to providing consumers with a smooth shopping experience.	“Alignment of Fundamentals”, “Centralization of Back-end system”, “Organization Transformation”

2.4. Cross channel integration as service

Cross channel integration or omnichannel is essentially a “service” that is provided by a retailers or brands to provide consumers with a “seamless buying experience”

(Sousa & Voss, 2006; Trenz et al., 2020). Previous studies investigated omnichannel transformation as a stimulus using a variety of cross channel integration criteria such as channel service configuration and integrated interactions (Natarajan, Ramanan, et al., 2023) by positioning channel integration as a service offerings. Further, literature suggests integrating several channels is critical for businesses to improve consumer perception of omni-channel retail service quality (e.g., Cao & Li, 2018; M. Zhang et al., 2019). Sousa and Voss (2006) argue that the unique aspect of multichannel service quality may be seen as a result of the quality of integration. Previous literature by providing guidance of various criteria of service quality in the environment of multi-channel, suggests cross channel integration is a service function. For example, perceived quality of retail in-store CCI service can be explained as the customers' assessment of the attributes such as in-store atmosphere, in-store technology, uniformity of product information, personalization, availability of channels, quick gratification, and return policy (Min Zhang et al., 2022). Banerjee (2014) proposes a framework for cross channel integration quality that consists of two dimensions. The first dimension is channel service configuration quality, which includes factors such as the variety of channel options available, the transparency of channel-service configuration, and the suitability of the channel-service configuration. The second dimension is integrated interaction quality, which encompasses aspects such as consistency of content, integration of transaction data and interaction data, consistency of processes, and integration within and across channels. Further, perceived multichannel quality is measure by attributes of convenience, reliability, goodness, and problem-solving across channels (Y. C. Hsieh et al., 2012). Finally, integration quality is also operationalized as "customer seamless service experience across channels" (Sousa & Voss, 2006).

2.5. Demand-side perspective of multi-channel

Taking supply-side perspective, a body of literature studied effect of cross channel integration on the shareholder value (Geyskens et al., 2002; Christian Homburg et al., 2014), store sales (Christian Homburg et al., 2014), firm performance (Xu et al., 2014) , attainment of economies of scale (Chaffey, 2010; Neslin et al., 2006), enhancement of financial performance (C. Steinfield et al., 2002), and customer profitability (Gensler, Leeflang, et al., 2012). Further, there are studies like effect of channel elimination (Konuş et al., 2014) and effect of addition of offline channel for a typical online sellers (Jill Avery et al., 2011), and creation of synergies among various channels (Neslin et al., 2006).

While there is a decent amount of knowledge available on cross channel integration from supply-side perspective, much less is available from demand-side perspective that helps understand how consumers respond to it. Further, demand side perspective upholds the construct of cross channel integration for its being highly customer-oriented (Steinmann et al., 2016), as a means of handling customers (M. Stone et al., 2002), customers transition from channel A to channel B (Montoya-Weiss et al., 2003) and offer values to customers (Gulati and Garino, 2000) such as increased satisfaction (Montoya-Weiss et al., 2003) through seamless shopping experience (Goersch, 2002). Also, there are studies that has consider certain aspects of multi-channel to understand consumers' search decision & purchase decision (Verhoef et al., 2007), channel adoption (Bilgicer et al., 2015), purchase behavior (Nierop et al., 2011; Wang et al., 2015), channel choice (Melis et al., 2015; Zhao and Deng, 2020), subsequent purchase behavior (Gong et al., 2015), preference (Kaczorowska-Spychalska, 2017), use (Hart, 2017), loyalty (Ansari et al., 2008; Frasquet and Miquel, 2017; Ieva and Ziliani, 2017; Schramm-Klein et al., 2011), seamless shopping journey (Cocco and Demoulin, 2022).

Although some knowledge is available on consequence of certain scattered elements of multi-channel on demand-side dimensions, there is limited knowledge on the impact of various drivers of cross channel integration strategy (Cao & Li, 2015) on it like perceived value, preference, and loyalty. Further, extant literature has examined some of the demand-side constructs such as purchase behavior (Wang et al., 2015), channel choice (Zhao and Deng, 2020), preference (Trenz et al., 2020), loyalty (Frasquet and Miquel, 2017), seamless shopping journey (Cocco and Demoulin, 2022), and brand experience (Massi et al., 2023).

Changes in customer purchasing behavior are compelling retailers to reassess the services they offer and the distribution channels they utilize. Nowadays, many firms operate across many channels to provide customers a seamless and integrated shopping experience, both online and in physical stores. The objective of the omnichannel marketing is to streamline and enhance the shopping process (Griffiths & Howard, 2008). Due to the dynamic nature of the consumer experience, individuals follow a non-linear path while making purchases. The non-linear method starts with the act of finding information, creating awareness, doing an evaluation, and culminates with the decision to make a purchase. Customers have the option to contact retailers through several channels such as a call center, a physical shop, or mobile applications, depending on their preferences and requirements, facilitated by technological advancements. While it is possible for customers to have direct connections with retailers, it is more typical for the interactions between consumers and retailers to be non-linear. This means that consumers may join or leave these relationships at unpredictable moments or through different routes. Thanks to the continuous presence of many channels and contact points, the consumer purchasing process has become more easily accessible and ongoing. Customers anticipate a heightened level of integration, consistency, seamlessness, and personalization as the trip becomes increasingly non-linear,

dynamic, continuous, and easily available. Multi-channel models do not support this capability, but an omnichannel strategy enables a seamless and customer-centric experience that is easily accessible (Carroll & Guzman, 2015). Omni-channel retailers may effectively respond to the evolving client expectations by consolidating several consumer viewpoints into a single, cohesive vision. The channels are synchronized and exhibit a unified, uniform approach to conducting business. Modern consumers have high expectations for a unified and smooth experience. For instance, when a client purchases a product through an online platform and desires to return it at a brick-and-mortar store, they could experience frustration because they assume that all channels are controlled by a single retailer and expect the retailers to accommodate their request through any channel (Carroll & Guzman, 2015).

2.6. Customer perceived value (Demand-side perspective)

Today, customers are already in an omnichannel mode wherein using online and offline channels have become routine and have adopted to the practice of searching product or service information on one channel and making purchase on another, termed as free-riding in the context of multichannel (Van Baal & Dach, 2005). In the omnichannel context, free-riding that is termed as webrooming (Kramer, 2014) is used and so is its reverse process, that is, showrooming for using offline channel for information and online for purchase (Ailawadi & Farris, 2017).

This behaviour has come into existence, gained continued traction and has become ubiquitous not only due to the information explosion marked by the information technology, but by the benefits and value the omnichannel brings with it. The omnichannel practices of retailers and brands has manifested into the factors that the customers perceive as value such as ease-of-use, usefulness, and compatibility that motivates them not just to try but actual usage of omnichannel too (Silva et al.,

2018). Customers like attributes that provides impetus for automatic convergence of online and offline channels without its explicit quest (Burke, 2002). It is imperative therefore to trigger all these attributes so that it manifests into the desired perceived value for customers, which brings in a desired behaviour for the organization.

Organisations, in order to stay ahead of competition, need to generate higher value for consumers (Arun Sharma et al., 2001) and hence is the vital factor in marketing research, influencing consumer behaviour and decision-making process. In addition to guiding consumer preferences and playing a critical role in predicting customer behaviour and intention to repurchase goods (M. Y. Lee et al., 2009), customer perceived value is a vital index for the prediction of consumer loyalty and purchase purposes (C. Chiu et al., 2014; M. I. El-Adly, 2019; Konuk, 2018). Further, customer perceived value is considered to be the best indicator of competitive performance and an even better indicator of customer behaviour in terms of repurchase intention (Cronin et al., 2000; R. B. Woodruff, 1997).

In its most simple form, customer perceived is defined as "a *trade-off between perceived quality and sacrifice"* (Dodds & Monroe, 1985). Some studies define the perceived value construct based on the concept of a trade-off between giving and receiving, and assess it using indicators such as "fair price", "good value" (J. Baker et al., 2002; J. C. Sweeney et al., 1999), "value for money" and "meeting quality and price requirements" (Grewal, Monroe, et al., 1998), "Service Quality", "sacrifice" (Brady & Robertson, 1999; Cronin et al., 1997), "attribute performance" (Patterson & Spreng, 1997). However, as this unidimensional and simple form has been criticized in the literature for not accounting for dimensions, such as abstract and affective elements (Sanchez-Fernandez & Iniesta-Bonillo, 2007; Zauner et al., 2015), complex and multidimensional frameworks of perceived value has been

propounded such as Babin et al. (1994), Danaher and Mattsson (1994), Holbrook (1994), Sheth et al (1991), R. Woodruff and Gardial (1996), Zauner et al. (2015). Within the multidimensional perspectives, numerous studies have been presented in separate research streams (Sanchez-Fernandez & Iniesta-Bonillo, 2007). However, all of which proposes different understandings of the elements in CPV and, on top of that, there are only a few attempts of identifying the actual value drivers within them (Gronroos, 1984).

Since Keith's (1960) and Rathmell's (1966) work, which were among the first to publish, the idea of perceived worth has been the subject of substantial multidisciplinary research. Zeithaml's (1988) conducted a comprehensive analysis of CPV, finding variables such as reputation, quality, price, and emotional reaction. The perceived value of service (SERV-PERVAL), an expansion of Sweeney and Soutarh's (2001) PERVAL framework in service sectors, was developed by operationalizing Petrick's (2002) model.

It is crucial to look at a number of perceived value elements so that better understanding of the link between perceived value and other aspects of customer behavior, such as preference and loyalty (Petrick, 2004) can be developed. Due to the unidimensional approach's lack of validity (Petrick, 2004; Woodruff, 1997) and consistency (Petrick, 2004) in earlier research, subsequent studies on perceived value have switched to approach with multiple attributes. Sheth et al. (1991), for instance, established five consumption values: conditional, functional, social, emotional, and epistemic. These values affect an individual's decision-making depending on the significance of the scenario. Similarly, Babin and Attaway (2000) distinguished between two hedonic and utilitarian values. Likewise, we reviewed the literature of customer perceived value, summary of which is provided in the

Table 2.5: Literature review on customer perceived value

Author	Dimen-sions	Key elements of customer perceived value
(Rathmell, 1966)	Uni	Intangible factors
(Kahneman & Tversky, 1979)	Uni	Price Risk
(Thaler, 1985)	Uni	Transaction utility; judgement stage; perceived price, convenience and pleasure
(Dodds & Monroe, 1985)	Uni	Perceived quality versus sacrifice; Price-based studies.
(Hauser & Urban, 1986)	Multi	Functional utility or economical costs-purchasing a product/service
(V. A. Zeithaml, 1988)	Uni	Tansaction utility; judgement stage; perceived price, convenience and pleasure
(Dodds et al., 1991)	Uni	Acquisition utility
(V. A. et al. Zeithaml, 1996)	Uni	Consumers' sacrifice in terms of time and cost
(Alba et al., 1997)	Uni	Good Shopping Experience
(Patterson & Spreng, 1997)	Uni	Attribute performance
(Cronin et al., 1997)	Uni	Service quality, Sacrifice
(Grewal, Monroe, et al., 1998)	Uni	Perceived quality, Selling price
(V. A. Zeithaml, 1988)	Uni	Benefits versus sacrifices
(Nguyen & Leblanc, 1998)	Uni	Prices and utilities; quality and cost
(Danaher & Mattsson, 1994)	Multi	Axiology of value theory: extrinsic value - utilitarian use, intrinsic value - hedonic appreciation, and systematic value - logical reasoning
(De Ruyter et al., 1997)		
(Lemmink et al., 1998)		
(J. C. Sweeney et al., 1999)	Uni	The five factors that determine the quality of a service are functional, technological, product, relative pricing, performance/financial risk
(Brady & Robertson, 1999)	Uni	Service quality, Sacrifice
(Jozée Lapierre, 2000)	Multi	Other possible options, key factors that contribute to the overall evaluation of a product or service include quality, customization options, responsiveness, flexibility, reliability, technical

		Competence, image of suppliers, trust, and solidarity. Cost, temporal, laborious, and vigorous exertion, struggle or disagreement Second order: Benefit, sacrifice
(Monroe, K. B., & Krishnan, 1985)	Uni	Monroe's approach (Price-based studies): price, perceived quality, sacrifice, perceived value and willingness to buy
(Dodds & Monroe, 1985)	Uni	
(Monroe & Chapman, 1987)	Uni	
(W.-K. Li et al., 1994)	Uni	
(Wood & Scheer, 1996)	Uni	
(Grewal, Krishnan, et al., 1998)	Uni	
(Agarwal & Teas, 2001)	Uni	
(Varki & Colgate, 2001)	Uni	Service quality, Price
(Mathwick et al., 2001)	Multi	Visual appeal, Entertainment, Escapism, Enjoyment, Economic value Second order: The key elements are aesthetics, playfulness, service quality, and customer return on investment, effectiveness
(J. C. Sweeney & Soutarh, 2001)	Multi	Emotional, social, and functional value due to quality and price
(J. Baker et al., 2002)	Uni	Interpersonal service quality (4), Merchandise quality (2), Monetary price (2), Time/effort cost (3)
(Petrick, 2002)	Multi	Quality, Emotional response, Reputation, Monetary price Behavioral price
(N. C. Smith, 1996)	Multi	Holbrook's typology of consumer value is a classification system that categorizes different types of value that consumers seek. 1. Comparison between extrinsic and intrinsic value
(Richard L Oliver, 1996)	Multi	
Holbrook (1994, 1999)	Multi	
Richins (1999)	Multi	

Solomon (1999)	Multi	2. Value based on self-interest compared to value based on consideration by others 3. Comparison between proactive and responsive value
(Bevan & Murphy, 2001)	Multi	
(Bourdeau et al., 2002)	Multi	
(Mathwick et al., 2001)	Multi	
(Z. Chen & Dubinsky, 2003)	Uni	The factors that influence the user's online buying experience include perceived product quality, perceived risk, and product pricing
(Heinonen, 2004)	Uni	time and location (+outcome and process elements)
(V. A. Zeithaml, 1988)	Uni	Zeithaml's approach (Means-end theory): get-give
(Bolton & Drew, 1991)	Uni	
(R A Kerin, 1992)	Uni	
(T. Z. Chang & Wildt, 1994)	Uni	
(Hartline & Jones, 1996)	Uni	
(Brady & Robertson, 1999)	Uni	
(Gould-Williams, 1999)	Uni	
(J. Lapierre et al., 1999)	Uni	
(Petrick, 2002)	Uni	
(S. Baker et al., 2004)	Uni	
(Barrutia and Gilsanz, 2013); (Harris & Goode, 2004)	Uni	Service innovation
(Balasubramanian et al., 2005)	Uni	Good Shopping Experience
(C. Lin et al., 2005)	Multi	Get (benefit) and give (sacrifice).
(R. Woodruff & Gardial, 1996)	Multi	The customer value hierarchy. desired attributes, desired consequences, and desired goals,
(R. B. Woodruff, 1997)		
(van der Haar et al., 2001)		
(Overby et al., 2004)		
(Agenda & Jeffrey W. Overby, Robert B. Woodruff, 2005)		

(Ismet Anitsal & Daniel J. Flint, 2008)		
(Sanchez-Fernandez & Iniesta-Bonillo, 2007)	Multi	Intangible and emotional factors
(Nasution & Mavondo, 2008)	Uni	Consumers' sacrifice in terms of time and cost
(H. Chang & Chen, 2009)	Uni	Gets or receives
(Sumeet Gupta & Kim, 2007)	Uni	Price risk
(Kuo et al., 2009)	Uni	Money, quality, benefit, and social psychology
(Babin & Attaway, 2000)	Multi	Utilitarian and hedonic value: Utilitarian value as described in the above model, Hedonic aspects associated with intangible factors, emotional benefits and costs
(Babin & Babin, 2001)		
(Babin et al., 1994)		
(Barry Babin J. & Kim, 2001)		
(H.-C. Chiu et al., 2005)		
(Eggert & Ulaga, 2002)	Uni	Benefits and sacrifices
(Vargo & Lusch, 2004)	Uni	Value-in-exchange
(Pihlström & Pura, 2008)	Multi	Consumption-values theory comprises of functional, social, emotional, epistemic, and conditional value
(Sheth et al., 1991)		
(J. C. Sweeney & Soutarh, 2001)		
(J. Sweeney et al., 1996)		
(P. Williams & Soutar, 2000)		
(Y Wang, HP Lo, R Chi, 2004)		
(Vargo et al., 2008)	Multi	The context-linked process is characterized by its distinctive nature, reliance on personal experience, sensitivity to the surrounding context, and rich in meaning
(B. Edvardsson et al., 2010)	Multi	Social Systems
(Helkkula, 2012)	Multi	Customers value co-creators, customer experience in value-in-context

(Grönroos & Voima, 2012)	Multi	Service-dominant logic (SDL) suggests the phrase "value-in-context" to acknowledge that value may be understood in a more comprehensive and immersive manner within the context of customer experiences, which includes the exchange of products and services (from a Goods-sominant logic (GDL) viewpoint) and price
(Zauner et al., 2015)	Multi	Intangible and emotional factors
(Vargo & Lusch, 2016)	Multi	Value Co-creation (SDL perspective) process
(C.-F. Chen & Wang, 2016)	Multi	Time, cost and control of the service outcomes
(Sampaio, 2016)	Uni	Social, Emotional, Price and Quality
(Coetzee, 2016)	Multi	Functional (price and quality), emotional, and social
(Fang et al., 2016)	Multi	Gender, e-service quality, sacrifice, product quality
(Mohammad Fathi, 2017)	Multi	Four questionnaire items linked with CPV in the first order reflective relationship
(J. R. Hanaysha, 2018)	Multi	Corporate social responsibility, sales promotion, and store environment
(Leckie et al., 2018)	Multi	The overall value of the services, sense of autonomy, and the cost-effectiveness and exertion
(R. B. Kim et al., 2019)	Uni	Conceptualized as "Experience", which comprises of uniform and right price system across channels, personalized customer experiences (personalized offers / marketing), create and Integrate loyalty program, brand identify, good returns policy, access to real time inventory and delivery information across channels
(Samuelsson & Andersson, 2019)	Multi	Based on Consumption-values theory that comprise of technical quality of product, durable quality of product, aesthetic quality of product, technical competence, reliability, communication, certifications, monetary sacrifice, convenience sacrifice, switching costs, social image, reputation, policies, experience, personalized attention, interpersonal relations, sensing & responding, collaboration, environmental impact, and transparency. Second order: the second order consructs comprises of (1) functional value comprises of a quality of product, and service, (2) sacrifices, and (3) social value, (4) emotional, innovation, and environmental value

Note: “Multi” means multidimensional and “Uni” means unidimensional.

table 2.5. This table provides all the literatures on the CPV construct which shows evolution from unidimensional to multidimensional with varied dimensions.

According to (Trenz et al., 2020), cross channel integration is simply a "service" offered by a company to provide customers a "seamless buying experience." Furthermore, academics generally agree that experience is a construct that consumers see as a "value" as it comes from a well-thought-out customer experience (CE) and is known as a long-lasting competitive advantage (Itami and Roehl, 1991). This is supported by (Schmitt, 2010) and other researchers. In order to gain an advantage over competitors, a brand can strengthen its customer value proposition proposition (Gallino and Moreno, 2014), create value for customers (Kim et al., 2019), enhance benefits and reduce sacrifices (R. J. H. Wang et al., 2015), and offer integration services. By doing so, CCI effectively reflects the degree to which a brand has integrated its channel and offer integration service outputs. This, in turn, determines the extent of consumer seamless buying experience (Trenz et al., 2020) and perceived value (Kumar and Reinartz, 2016).

According to several studies customer perceived value is considered a significant predicator of consumer behaviour in an omnichannale environment, including intention to purchase (Gan & Wang, 2017; C. Kim et al., 2012; Mosunmola et al., 2019; Rakhmanita et al., 2023; Ramayah et al., 2018; Sullivan & Kim, 2018), intention to use (Kasilingam & Krishna, 2022), loyalty (Collin-Lachaud & Diallo, 2020; C. Kim et al., 2012; J. Yoo & Park, 2016), purchase behavior (Arbabi et al., 2022). Additionally, prior research has investigated the relationship between a number of CPV factors and consumer behaviour in an omnichannel setting, including functional value (Ming-Sung Cheng et al., 2009; Rakhmanita et al., 2023), conditional value (Ramayah et al., 2018), economic value (Arbabi et al.,

2022; L. W. Wu & Tang, 2022), experiential value (Kasilingam & Krishna, 2022), utilitarian value, hedonic value (Akel & Armağan, 2021).

2.7. Customer perceived value dimensions

The ‘value’ is probably most used or rather misused construct in management literature which is at times even vague (Khalifa, 2004). Hence, it is imperative to define ‘value’ with clarity and for organisations to understand the value it delivers to consumers which is not the case with most even when it promises upper edge over competition (James C. Anderson, 1998). Further, value is a subjective and relative concept that influences social behavior and decision-making processes as expressed in singular form as the result of a judgment (Boksberger & Melsen, 2011), and in plural form, it encompasses standards, rules, criteria, norms, aspirations, and ideals used for evaluative judgment (Mustak et al., 2013). It is crucial to acknowledge that the definition of value and hence it constituents can vary when exposed to different environments (C. Xu et al., 2015). In marketing, "value" refers to "customer perceived value" that is recognized as the customers’ overall assessment of what is received (benefit) versus what is given (sacrifice) since the work of Zeithaml (1988), The advantages of utilizing a product or service mostly arise from the perceived quality, reported enjoyment, and perceived convenience (Parente et al., 2015). Sacrifices often encompass both monetary expenses, such as price and fees, and nonmonetary costs, such as transaction costs, search costs, negotiation costs, and the time spent during the purchase (Kuo et al., 2009). To this end, the challenge of breaking down value, encompassing both benefits and sacrifices, into distinct elements or recognizing novel elements in various situations remains unresolved (C. Xu et al., 2015). Hence, to address this challenge in this study, undertaken to capture manifestation of the manufacturer-sponsor consumer brands’ cross channel integration on consumers, adopts two

different routes to recognize factors that translate into customer perceived value, and examine them. This is discussed below:

2.7.1. Based on Goersch, 2002

Steinfield et al. (1999) was first to point out existence of potential synergies between stores and website. The benefits of using channel integrated services in the setting of omnichannel are discussed in pior studies such as awareness (Yeğin and Ikram, 2022), convenience (E. Kim et al., 2017; Manuel Trenz et al., 2020), trust (Fernandes and Barfknecht, 2020), control (Jocevski et al., 2019), ubiquitous personalization (Hubert et al., 2020), and seamless experience (Mika Yrjölä et al., 2018). In the realm of information and communication technology (ICT), and therefore, omnichannel, perceived risk is a key concept that denotes the non-monetary sacrifices customers are ready to make. Researchers like Xu et al. (2015) have extensively recognized this concept. Using their interpretation of the purchase and consumption process (PCP) paradigm, MacMillan & McGrath (1997) demonstrated how to use the consumer consumption chain to find sources of differentiation that go beyond the core product. The aforementioned works were expanded upon by Goersch (2002), who also identified a number of potential customer advantages from the online-offline synergy and the use of PCP for integrating channel services (beyond product). Benefits to customers that have been highlighted include awareness, convenience, control, trust, ubiquitous personalization, and enhanced support. One risk perception found was sacrifice. The research conducted by Goersch (2002) concluded that the ultimate objective of multi-channel integration should be to provide an exceptional customer experience that is consistent and seamless across all channels. The study also offered suggestions on how to include this seamless experience as an additional perceived benefits for the customers.

In addition, prior research in an omnichannel setting has considered customer perceived value (CPV) as an antecedent of consumer behaviour, including intention to purchase (Sullivan & Kim, 2018), and loyalty (Collin-Lachaud & Diallo, 2020). This has revealed the significance of a wide range of CPV components, including experiential value (Kasilingam & Krishna, 2022), utilitarian value, hedonic value (Akel & Armağan, 2021), in the equation. Petrick (2004) highlights how important it is to look at many aspects of CPV in order to understand how it relates to aspects of customer behaviour like loyalty and preference. It will be necessary to combine these many CPV measurements into a predefined set of dimensions. The idea of CPV has been thoroughly studied since Keith's groundbreaking work in 1960, using a variety of models by Sheth et al. (1991), Babin and Attaway (2000), and others. Previous literature that looked at CPV as antecedents of different types of consumer behaviour classified CPV according to a number of well-established previous ideas. For instance, based on Verhoef et al. (2009), Liu-Thompkins et al. (2022) divided CPV drivers of loyalty in the setting of retailing into cognitive, emotive, and social drivers. Furthermore, the categorization of utilitarian and hedonic values by Vieira et al., (2018) was predicated on a review of a number of earlier literatures in relation to consumer purchasing behaviour. This suggests that different empirical research have concentrated on certain advantages, falling short of the comprehensiveness needed to comprehend CPV in the context of omnichannel. It will be difficult to use these models as the basis for the present investigation. Therefore, a comprehensive paradigm offered by Goersch (2002) is advised to better comprehend CPV in this setting. This approach ensures a thorough understanding of CPV in the omnichannel environment by taking into account all context-relevant aspects from an elevated perspective.

Till this end, we considered following factors of customer perceived value in the first empirical study, that is, study 2; awareness, convenience, control, trust,

ubiquitous personalization, seamless experience and perceived risk. Details explanation of each of the factors is done in the chapters 3.

2.8. Brand preference

The concept of preference is examined by several academic fields, including psychologists (e.g., Albanese, 1987), sociologists (e.g., Tomer, 1996), and economists (e.g., Samuels, 1978). Nevertheless, there is a lack of consensus over the concept of preference within these fields. For instance, economists assert that preferences are exogenous, stable, accurately understood, and are demonstrated by decision behaviour (March, 1978). Critics of the economic perspective on preference argue that it makes the assumption that preferences are both consistent (Albanese, 1987) and influenced by internal factors. An individual's tastes are subject to change and can be influenced by internal or external factors (Samuels, 1978).

Preference, in the field of marketing, refers to the level of attractiveness or the selection among several options (Oliver and Swan, 1989). Zajonc and Markus (1982) argue that “a preference is not primarily expressed through thoughts or statements about an object, but rather through one's actions towards it”. In contrast, Tomer (1996) propounded four distinct kinds of consumer preferences, which is explained as follows: “Actual-preference” is referred to the extent to which a consumer values and becomes skilled in using specific goods. “Meta-preferences” refer to an individual's preferences for their actual preferences, which are influenced by the evaluative judgments of their higher-level self, the meta-self. “True-preferences” relate to a distinct collection of choices that accurately and really reflect what is optimal for an individual. “Unrestrained-preferences” relate to those that fulfill basic or physiological demands. An individual's preferences are

shaped by their genuine preferences, which are influenced by their meta-preferences and unconstrained preferences.

Further, brand preference is also defined "as a set of brand assets and liabilities linked to a brand and a customer's subjective and intangible assessment of the brand, above and beyond its objectively perceived value" (Keller, 1993; V. Shankar et al., 2008; D. C. Smith & Aaker, 1992). The two diametric opposite perspective of brand preference is "archaeological" and "architectural" (John W. Payne et al., 1999). Some of the literatures have conceptualized brand preference as a model of consumer behavior (e.g., Howard and Sheth, 1969). Further, factors of brand preference is categorized into three types based on the characteristics that condition consumer behaviour and they are consumer herself, product/brand or object and situation (Belk, 1974, 1975a, 1975b; Woodside & Trappey, 1992).

Marketing literature has several definitions of brand preference. Table 2.6 displays a concise overview of these factors, accompanied by a rational classification of brand preference. The first rational categorization proposed in this study is distinction, which defines brand preferences by elucidating its formations via the process of individuals discerning and assessing various brand alternatives. Inclination, the subsequent rational classification, elucidates brand preference as the act of critically assessing several options, resulting to a preference for a specific brand. The subsequent classification is founded on consequential behaviour, wherein brand preference is elucidated by referring it to the customers' initial-stage that leads to the formation of intention, decision-making, choice, purchase, and loyalty. The final classification has been routed on its comprehensiveness, as includes distinction, inclination, and consequential behaviour responses of customer in the definition of brand preference. So, to sum-up, brand preferences arise from distinction between options, leading to a inclination towards a certain

brand, which is characterized by comprehensive reactions of an emotive response is indicated by the level of similarity, while “logical response” relates to the distinct additional value of the brand, and behavioral response is demonstrated by the intended action towards the brand. Therefore, the current study by taking position of comprehensiveness, proposes the definition for brand preference as the behavioural inclinations that reflect the consumers’ attitude towards a brand.

The current thesis is based on all the four perspective of distinction, inclination, consequential behaviour, and comprehensiveness. Hence, the studies in this thesis follows the definition provided by Ebrahim, 2013

2.8.1. Why studying brand preference against another brand construct?

Brand preference is closely connected to, although conceptually separate from, other brand concepts. Gaining clarity on the distinction that separates brand preference from other branding / brand-building structures helps enhance our comprehension of its significance. Specifically, brand preference should not be confused with brand loyalty, brand choice, brand attachment, or brand awareness/liking. But, before we discusses these constructs, let’s clarify the difference between branding and brand-building in the literature. Table 2.7 provides primary distinctions between brand preference (BP) and other branding / brand-building characteristics.

Branding and brand building are interrelated concepts in marketing, but they focus on different aspects of creating and maintaining a brand's identity and value.

Table 2.6: Definition of brand preference

Source	Definition	Rationale classification
D'Souza and Rao, (1995)	They are influenced by the specific beliefs that are prominent in their mind at a certain moment.	*Distinction:* Brand preference is formed via the process of people distinguishing and evaluating different brand options.
Wu (2001)	It is the selected brand among multiple brands of equal quality	
Levin et al. (2005)	This conceptualization assesses products for online or offline shopping based on attribute values and weights. The utility of a product is determined by multiplying each characteristic's value by its weight, allowing a comprehensive analysis of product and consumer variations.	
Herrando et al. (2017)	Brand preference is a powerful emotional reaction	
M. Li et al. (2021)	It is the inclination of an individual to favor a certain brand above other competing brands	
Hellier et al. (2003)	The degree by which a stronger inclination towards one brand compared to another is shown by the customers	*Inclination:* The process of critically assessing several options, leading to a preference for a certain brand.
Anselmsson et al. (2007)	The aggregate value of unique assets obtained by consumers and measured by the consumer's perception of the brand's power	
Bass and Talarzyk (1972)	Consumers' attitudes and principles for product characteristics, quantified for individual brands, elucidates brand preference.	
Cobb-Walgren et al. (1995)	The inclination to purchase a specific product or service, even when alternative options possess same pricing and characteristics.	
Bettman et al. (1975); Howard and Sheth (1969)	It is the inclination towards a specific brand by the customers	
DAM (DAM, 2020)	The inclination of buyers towards specific brands, which is influenced by their cognitive information processing of brand stimuli.	

W. Kim et al. (2012)	The act of favoring one particular brand above other brands that are in competition.	
Gómez-Rico et al. (2023)	Brand preference is often assessed by requesting customers to indicate their preferred brands from a curated selection of items or services	
Chinomona and Pooe (2013)	Brand preference serves as the initial stage for consumers to develop brand loyalty.	*Consequential behavioural*: Brand preference is referred to as a primary-phase of evolutionary consumer behaviour that leads to the brand loyalty
(Bagozzi, 1982)	Brand preference is an indication of how customers interpret information, which in turn influences their choices	
Yasri et al. (2020)	Brand preference is influenced by the way customers digest information, which in turn impacts their decision-making.	
Ye et al. (2017)	Consumer brand preference is a crucial metric for comprehending consumer decision-making and its impact on the intention to purchase or visit	
Chang and Liu, (2009)	The prejudice inclination towards a specific brand by customers	*Comprehensive:* The brand's impact on consumers may be measured by their emotional, intellectual, and behavioral reactions.
Hsee et al. (2009)	These are of two sorts: “liking preferences”, which pertain to the emotional reactions towards the brand, and “disclosed preferences”, which represent the behaioural responses towards the brand.	
Keller (1993)	Brand equity refers to the compilation of brand assets and liabilities, together with a customer's subjective and intangible assessment of the brand, which extends beyond its objectively measurable value	
V. Shankar et al. (2008)	Brand equity refers to the compilation of brand assets and liabilities, together with a customer's subjective and intangible assessment of the brand, which extends beyond its objectively measurable value	
Alamro and Rowley (2011)	Encampasses 11 factors that is categorized into three distinct types: awareness, image, and customer attribute antecedents.	

Kronrod and Huber (2019)	It is determined by the mix of brand memory and brand attitude.	
Bass and Talarzyk (1972)	It is determined by cognitive processes and brand attitudes.	
Ebrahim et al. (2016)	It is a consumer behavioral (action) inclination towards a brand, influenced by their perceived value (cognitive response), similarity (affective response), and anticipated actions. It arises from distinguishing between options and is influenced by their beliefs about the brand's attributes.	Comprehensive

Branding is the process of creating a distinct identity for a product, service, or company. It involves the use of names, logos, slogans, design, and messaging to establish a unique presence in the market and in the minds of consumers. It focuses in establishing and maintaining the visual and emotional identity of the brand. In incorporates activities such as designing a logo and visual elements, crafting a brand message and voice, developing a brand name and tagline, ensuring consistent use of brand elements across all marketing materials, creating brand guidelines for consistency. The purpose of branding is to differentiate the product or service from competitors and to make it recognizable and memorable to consumers.

Brand Building is the ongoing process of enhancing the brand's value, reputation, and customer loyalty over time. It involves strategic efforts to that provides strength to the brand's presence and emotional connection with the target audience. It focuses on developing and nurturing the brand to increase its value and consumer loyalty. It involves activities like engaging in marketing campaigns that reinforce brand values and message, creating and maintaining a strong online and offline presence, building customer relationships through exceptional experiences and service, leveraging social media and content marketing to engage patrons, monitoring and managing the brand's reputation, innovating and adapting the brand to stay relevant. The objective of brand development is to establish a robust and favorable perception of the brand, resulting in heightened consumer loyalty, advocacy, and total brand value.

Key Differences between these two constructs includes differences in focus, as branding focuses on the initial creation and design of the brand identity, whereas brand building focuses on the continuous development and enhancement of the brand’s reputation and value. Branding often is a one-time or periodic activity during rebranding efforts, whereas brand building is an ongoing, long-term process

that evolves with the brand and market conditions. On one hand, branding involves creating tangible brand elements (logos, names, designs), on the other brand building involves intangible efforts like customer engagement, experience management, and reputation enhancement. The objective of branding is to establish a recognizable and distinct brand identity, whereas, brand building is deployed to enhance and sustain the brand's value and consumer loyalty over time.

In summary, while branding sets the foundation by creating the brand's identity, brand building focuses on growing and nurturing that brand to maximize its value and impact in the market. Both are essential for the success of a brand, but they operate at different stages and with different objectives.

2.8.1.1. *Brand* preference *versus Brand Choice*

Choice refers to the act of consolidating preferences to facilitate the task of making a decision (Beach, 1993). Brand choice refers to the act of selecting and using a certain brand (Bettman et al., 1998). Brand preference may be considered a driving force behind the selection of a certain brand. Consumers make decisions based on well-defined preferences, which help them identify the range of options available for their decision-making (Louviere et al., 2000). Consumer preferences and choices demonstrate more constancy, rendering preference a more dependable predictor of consumer decisions in comparison to attitude (Bither and Wright, 1977). From an economic perspective, the primary objective of the customer while making a decision is to fulfill their desire and choose the option that provides the highest level of satisfaction (Rizvi, 2001). When a customer fails to choose the best option to maximize their satisfaction, they are hindered by competing preferences (S. O. Yoon & Simonson, 2008). (F. Hansen, 1976) recognizes the conflict that arises while considering different options as a defining characteristic of the decision-making process.

Sagoff (2003) proposes that the correlation between the selection of a brand and the favoritism towards that brand is influenced by the prevailing market conditions. Under optimal market conditions, customers will select their favorite alternatives. In an competitive scenario, consumer choice is influenced by situational considerations, for example, availability of products. As a result, customers may make brand selections that do not align with their preferences. Marketing managers prioritize brand preference above brand choice as a signal for recurrent purchases. This is because customer preferences exhibit a high degree of consistency throughout many situations, instead of being confined to a certain setting (Amir & Levav, 2008).

2.8.1.2. Brand preference versus Brand Attachment or Affection

It is characterized by a more intense affectivel reaction compared to brand preference, encompassing feelings of passion, connection, and affection. The measurement assesses the intensity of the connection between the consumer and the brand (Thomson et al., 2005). Brand attachment is a measure of the enduring connection between a consumer and a brand, and it may be used to forecast both current and future purchases based on prior buying behavior (Esch et al., 2006).

Brand affect, brand liking, and brand commitment are notions that are associated with emotional characteristics. Brand affect refers to a subjective emotional state associated with a brand (Mano & Oliver, 1993). Brand preference is correlated with the potency of favorable brand attributes (Anselmsson et al., 2008). Brand commitment is the strong emotional connection that customers have towards brands (Carlson et al., 2008; Desai & Raju, 2007). Consumers' brand preferences are influenced by cognitive and behavioral reactions (Hsee et al., 2009; Zajonc & Markus, 1982), and are connected to the distinctiveness of the brand asset

(Anselmsson et al., 2008). The contrast between brand attitude and brand preference is exemplified by the perception of attitudes as enduring psychological inclinations to evaluate an item; a singular assessment of certain brands (McFadden, 1996). Preference, in the context of decision-making, involves making a comparison assessment between several options. It is a reflection of a consumer's thoughts, feelings, and subsequent actions towards an object or choice.

2.8.1.3. Brand preference versus brand equity

Brand preference and brand equity are closely related concepts in marketing, but they are distinct in their meanings and implications.

Brand equity refers to the overall value a brand adds to a product or service, which results from consumer perceptions, associations, and loyalty towards the brand. It encompasses a broader spectrum, including brand awareness, perceived quality, brand associations, brand attitude, purchasing intention, and brand loyalty (Keller, 2008). It is measured through a combination of qualitative and quantitative metrics, including brand awareness, customer satisfaction, market share, and financial performance. Brand equity is built over time through consistent positive brand experiences, marketing efforts, and the inherent value the brand brings to its products or services. A comprehensive concept that includes brand preference as one of its elements but also looks at the brand's overall impact on consumer behavior and business outcomes, from both demand-side and supply-side, perspectives.

Aaker (1991) presents a model for comprehending and controlling brand equity. The study emphasizes the importance of brand awareness and brand associations (including trust) in developing strong brand equity. Keller (1993) developed a comprehensive model of “customer-based brand equity” that encompasses brand

awareness and brand associations (including trust) as key dimensions. The study provides empirical evidence of the positive impact of brand equity on consumer behavior and business performance.

Yoo and Donthu (2001) focuses on developing a measurement scale for “consumer-based brand equity”. The research confirms the impact of brand awareness and brand associations (including trust) on brand equity across different product categories. Delgado-Ballester and Munuera-Alemán (2001), by examining the association of brand trust, brand loyalty, and brand equity, which indicates that brand trust is a significant driver of brand loyalty, which subsequently influences brand equity. Chaudhuri and Holbrook (2001)explores the sequential effects of brand trust, brand affect, brand loyalty, and brand performance. The findings illustrate that brand loyalty plays a mediating role in the connection between brand trust and brand performance. These studies emphasize on the importance of brand awareness and trust as fundamental elements of brand equity. They provide empirical proof that demonstrates the beneficial influence of brand equity on consumer behavior, customer loyalty, and business performance.

Brand preference refers to consumers' inclination to choose a specific brand over others when faced with various options. It reflects the consumers' favorable attitude towards a brand and their likelihood to select it over competing brands. It centers on consumer behavior and choices at the buying point, which can be measured through surveys and market research that assess consumer choices and preferences. It is influenced by marketing efforts, product quality, past experiences, and individual tastes and preferences. Brand preference is an element of brand equity but is more specific to the action of choosing a brand.

Brand Preference is specific to consumer choice and selection behavior, whereas brand equity encompasses the overall value and strength of the brand in the marketplace. On one hand, brand preference is measured by consumer selection and preferences, brand equity is measured by a broader metrics like brand awareness, loyalty, perceived quality, and financial performance. Brand preference focuses on the act of choosing one brand over others, brand equity focuses on the cumulative value created by the brand's presence and reputation.

In a nutshell, while brand preference indicates a consumer’s choice of one brand over another, brand equity represents the overall value and strength of a brand in the marketplace.

2.8.1.4. Brand preference versus brand loyalty

According to the definition provided in the disctionary (www.businessdictionary.com), brand preference refers to the level of loyalty a customer has towards a certain brand. This indicates that the consumer would pick that brand above others when there are competing options, but will be willing to accept alternative brands if the preferred one is not available. Brand loyalty is defined as the degree of consumer devotion to a certain brand, as demonstrated by their repeated purchases, regardless of the marketing efforts of rival companies.

According to Oliver (1999) in the marketing literature, brand loyalty is defined as: "the strong and unwavering dedication to consistently repurchase or patronize a preferred product or service in the future, even when faced with external factors or marketing strategies that may tempt one to shift to the competing brands"

This concept delineates two fundamental aspects of brand loyalty: behavioral loyalty, which pertains to the recurrent purchases of a particular brand, and

attitudinal loyalty, which refers to the psychological dedication of consumers towards the brand as shown in their disposition (Arjun Chaudhuri & Holbrook, 2001). The process of consumer loyalty consists of four distinct phases: “cognitive loyalty”, “emotional loyalty”, “conative loyalty”, and “action loyalty”. During the initial stage, customers exhibit logical behavior and prioritize the evaluation of brand qualities and other distinctive aspects. The second phase involves emotional growth resulting from the brand's satisfactory performance and favorable experiences. At the penultimate level, emotional loyalty transitions into behavioral intentions to purchase the brand. Consumers reach the ultimate level of loyalty when they not only purchase a brand but also make repeat purchases, even in the face of obstacles (R. L. Oliver, 1999)

The initial three stages of decision-making in brand loyalty are the central focus of brand preference. The text discusses the expressed inclination for specific brands over a period of time, along with consistent patterns of behavior (Moschis et al., 1984). Brand preference and attitudinal loyalty are two separate concepts (Mattila, 2001). However, both concepts are based on the assumption that customers' strong opinions about the brand's cognitive structure contribute to brand loyalty (D. Kim et al., 2011). Consumers' brand preference does not immediately result in purchases, but it will eventually be demonstrated by consistent and strong preference (Mellens et al., 1996). According to (Heilman et al., 2005). Customers are inclined to exhibit brand loyalty towards their chosen brands. Hence, the key motif is that the predisposition towards a particular brand is connected to the steadfastness towards that brand. However, brand loyalty is more accurately represented by the constant and ongoing pattern of repeat purchases over a lengthy period of time.

Rossiter and Bellman (2005) propose several degrees of preferences and the related

states of loyalty. Brand preference refers to the strong inclination that customers have towards either a single brand or several brands. It represents the level of loyalty that consumers exhibit towards a certain brand. Moderate brand preference is characterized by a lack of strong attachment to any one brand, leading customers to be more inclined to transition between several brands. Neutral preference refers to the state in which customers may lack awareness of a certain brand or exhibit loyalty towards other brands. Consumers exhibit negative brand preference when they do not own, and will not develop, loyalty towards a certain brand. Brand preference levels serve as distinct market segments, prompting marketing managers to develop targeted tactics for customers inside each group, taking into account their specific preference level. Consumers with moderate or neutral brand preferences might be encouraged to develop strong preferences. Nevertheless, customers who have a negative brand preference are unable to exhibit loyalty. Instead, they may develop a relatively low or moderate degree of liking.

Consumer loyalty and attitudinal and behavioral loyalty are influenced by brand choice (D. Kim et al., 2011; Tolba & Hassan, 2009). Therefore, loyalty can be regarded as an accurate indicator of brand choice (S. Gupta, 1988; Hardie et al., 1993). On the other hand, the inverse connection between loyalty, as indicated by the frequency of customer prior purchases, and brand choice was not confirmed (Hellier et al., 2003). Furthermore, Horsky et al. (2006) argue that excluding brand preference from the brand choice model results in an overestimation of brand loyalty and introduces a systematic bias in loyalty characteristics.

Table 2.7: Primary distinctions between brand preference (BP) and other branding / brand-building characteristics

Branding	Delineation	Brand preference view	Context	Authors
Customer-based brand equity	Brand equity is the added value that is associated with products and services. It is reflected in customers' thoughts, feelings, and actions towards the brand, as well as in the brand's price, market share, and profitability. It encompasses dimensions of brand loyalty, perceived quality, brand awareness, brand association, attitude and purchasing intention	The brand's impact on consumers may be measured by their emotional, intellectual, and behavioral reactions, excluding supply-side metrics such as financial performance	Conceptual	Aaker (1991); Keller (2008)
Brand Awareness	It encapsulates the fundamental understanding of the brand's mindset.	It indicates a prejudiced stance towards a specific brand that has been formed after being exposed to that brand.	Peanut butter	(Hoyer & Brown, 1990)
Brand Attachment	It measures the degree of emotional connection between the consumer and the brand.	The result can arise from a durable, unwavering, and enduring partnership.	Individually selected brand	(Thomson et al., 2005)
Brand Affect	It represents a condition of emotional equilibrium, whether it be good or negative.	A behavioral phenomenon refers to the observable expression of a consumer's emotional and intellectual evaluation of a particular brand.	Low & high involvement product	(Mano & Oliver, 1993)

Brand Attitude	The psychological tendencies characterized by a singular appraisal without the presence of a comparative aspect.	It pertains to the process of making decisions by comparing and evaluating different possibilities.	Household goods and cosmetics	(Suh & Youjae, 2006)
Brand Choice	It pertains to the procedure of choosing, acquiring, and utilizing a product or service.	It represents the personal worth of many options and the decision-making process that occurs before selecting a brand.	Conceptual	(Bettman et al., 1998)
Brand Loyalty	It is best shown by the constant and repetitive purchase behavior over a lengthy period of time.	It exemplifies prejudiced conduct towards the brand, demonstrating a consumer's emotions and thoughts about the brand.	Conceptual	Oliver, (1999)

2.8.2. The process of creation of brand preference

Preferences may be understood from two angles: explicit preferences, which are connected to archaeology and reveal concealed value, and construction, which is influenced by the interplay between aspects of information-processing systems and variables of choice tasks (John W. Payne et al., 1999). The construction viewpoint is a prominent focus in behavioral choice theory (J. W. Payne et al., 1992), but it does not encompass pre-existing preferences or the elements (based on task or situation) that influence preferences (Simonson, 2008). Consumers form and retain preferences for certain product characteristics, which they apply consistently across many situations, while also acquiring knowledge about the environment in which these preferences are relevant.

These two ideas are founded on polar opposites, since customers' exhibit inconsistency in their decisions. Brand preference development cannot be attributed to a single method, and neither archaeology nor building can offer a comprehensive explanation (S. Hoeffler & Ariely, 1999). Bettman et al. (2008) propose that the formation of preferences can be influenced by pre-existing or clearly defined preferences, but the process of forming preferences can also lead to the development of stable preferences.

Consumer behavior research distinguishes between economic theories that rely on normative assumptions and consumer rationality, and information processing theories that regard customers as logical thinkers operating under constrained rationality. The Engel-Kollat-and Blackwell-EKB model (J. F. Engel et al., 1971) and the theory of buyer behavior (Howard & Sheth, 1969) were among the early psychological models that included the concept of bounded rationality. Contrarily, Dhar and Novemsky (2008) contend that behavioral decision theory prioritizes the investigation of the source of rationality rather than preferences.

So, the current thesis has based the understanding of the brand preference from all both the perspectives of cognitive, and emotive together. This indicates that the preference is developed based on the logical, and emotional evaluation of the cross channel integration service strategy by consumers, who are experiencing it. This leads to the progress of the development of the discussion where the consequence of customer perceived value intersect with the brand preference or the antecedents of brand preference coincide with the customer perceived value of the cross channel integration service strategy of the manufacturer-sponsor consumer brands.

2.8.3. Customer preference in multichannel

We now take the discussion of the brand preference in the context of the multichannel and examine the literature that has studied the antecedents and consequence of the preference through deployment of various cross channel integration capabilities. Table 2.8 provides details on such studies along with the hypothesis, method adopted, context and brief findings. Based on the support of these prior literature, we move ahead in the thesis on the model development.

Table 2.8: Antecedent and consequence of preference in the context of multichannel

Author	Purpose	Hypothesis	Sample / Method	Context	Findings
Andersen, P. et al. (2020)	To provide a consumer-based theoretical framework that reflects customer perception and reaction to channel tactics and decisions.	*Antecedent:* Perceived channel value ⟶ Channel preference *Consequence:* Channel preference ⟶ Channel loyalty	Conceptual paper	Demand-side perspective to study consumer perception of channel position and functions	Consumers' perceived channel value significantly influences their loyalty behavior, with seven key channel features positively influencing this value, and the relationship is strongly influenced by customer value co-creation.

NGUYEN, H. N., & NGUYEN, A. D. (2022)	To examine how omnichannel features and customer perceptions affect channel selection and experience.	omnichannel attributes (channel transparency, channel uniformity, channel convenience), customer perceptions (perceived innovativeness, perceived personalization, perceived risk, perceived credibility) → customer experience, channel selection decision	400 electronic-device customers experienced in shopping with omnichannel retailers.	Relationship between channels attributes, its perceived value for customer, experience, and channel preference in the reference of omnichannel for electronic-device product category	Channel selection depends on customer experience, perceived innovation, customization, risk, and trustworthiness. Risk negatively affects experience and channel selection, whereas transparency, homogeneity, and ease greatly effect client experience.

Levin, A. M., Levin, I. P., & Weller, J. A. (2005)	To evaluate how evaluations of product attributes influence variations in buying preferences, both online and offline, across different items, consumers, and stages of the shopping process.	Utility of shopping online/offline ⟶ Shopping preference	Two samples in 4-parts, 199-under-graduate students, and 214-self-selected U.S. respondents through online survey panel were given a multi-part survey involving five product classes of clothing, airline tickets, books, electronics entertainment and computer	products like clothing and books	The differences in importance weights ascribed to features that support online shopping and traits that support offline shopping were crucial factors in predicting the variations in shopping mode preference among different products and individuals in both samples.

2.8.4. Literature on other dimensions of brand and branding

The table 2.9 provides an overview of the current status of empirical study about several aspects of 'brand' and 'branding' in the field that is evolving as a result of technological advancements, digitization, and the information revolution.

The findings involve impact on brand equity due to social media advertising (J. Hanaysha, 2016), Instagram marketing (S. Khan, 2018), Social media marketing components of user-generated contents, customer engagement, firm-generated contents and eWOM (Zahoor and Qureshi, 2017), perceived social media marketing (A. J. Kim & Ko, 2012), content (Estrella-Ramón et al., 2019). Brand equity comprises of brand awareness, brand loyalty, brand trust, brand image, perceived quality, and brand association.

Similarly, body of literature that studied several other elementss including brand awareness, branding, brand building, brand preference, brand perception have been provided in the below Table 2.9. This tables comprises of the studied dimensions of branding, explanatory and explained variables, along with the classification of these studies across different constructs within the domain of brands and brandking.

Table 2.9: Study on various dimensions of brand

Source	Explanatory factors	Responses	Classification
Arya et al. (2019)	Attachment to brand, Brand Engagement & Digital Footprint	adaptability of Branded apps	Brand Adaptability
Gielens and Steenkamp (2019)	Intermediation (ecommerce, D2C model, D2C brand building model, C2C matching model)	Branding activities	Branding
J. Hanaysha (2016)	Social Media	Brand Equity	Brand Equity
Luo et al. (2013)	Social Media - based metrics (Web blogs & consumer rating) versus online behaviour (SE, web traffic)	Brand Value	Brand Value
Chan et al. (2015)	Internet versus conventional advertisement effects	Brand Awareness	Brand Awareness
Hansen et al. (2018)	Social media firestorms	Brand Perceptions	Brand Perceptions
Khan (2018)	Instagram marketing	Brand Equity	Brand Equity
Kudeshia and Kumar (2017)	eWOM on Social Networking sites (Facebook)	Brand Attitude and Purchase Intention	Brand Attitude and Purchase Intention
Karpinska-Krakowiak (2016)	Social Networking sites (SNS)	Consumer-Brand relationship	Relationship
Zahoor and Qureshi (2017)	SMM (UGC, CE, FGC, eWOM)	Brand Equity	Brand Equity
Steenkamp (2020)	Digital channel, co-creation, transparency, connectivity, IoT	Building Brands	Building Brands
Lipiäinen & Karjaluoto (2015)	Digital media in digital age	Building Brands	Building Brands
Kucharska (2019)	social drivers (social interaction & self-expression)	Online Brand Community Identification (BCI)	Brand Community

C.H. Ho et al.(2 015)	Blog as advertisement and its categorization	marketing campaign	marketing campaign
Christodoulides et al. (2006)	Dimensions: Emotional connection, Online Experience, Responsive service nature, Trust, Fulfilment	ORS BE Scale	ORS BE Scale
Saari et al. (2017)	consumer-focused measure of sustainable development	CP of Brands' eco-friendliness	CP of Brands' eco-friendliness
Fatanti and Suyadnya (2015)	Instagram as value for promotion	Creation of Brand destination	Brand Destination
A.J. Kim and Ko (2012)	Entertainment, interactivity, trendiness, customisation, and word-of-mouth are SMM types.	Value, relationship, and brand equity	Brand Equity
Sangeeta Singh and Sonnenburg (2012)	social media environment: brand stories, consumers-brands collaboration	co-creation of brand performance	co-creation of brand performance
Hatch and Schultz (2010)	elements of co-creation (dialogue, access, transparency, & risk) and brand community	Phenomenon of branding	Branding
He et al. (2012)	social identity perspective of customer–brand relationship [integration of Brand Identity and Identification with Value, Trust, satisfaction]	Prediction of brand loyalty	Brand Loyalty
Hue et al. (2011)	Trust, Affect towards brand community, commitment of brand community	Loyalty behaviour (Repurchase Intentions, pWOM, constructive complaints)	Brand Loyalty
Kostyra et al. (2016)	Online Customer Reviews (OCRs)	customer Brand choice decision	customer Brand choice decision
Barreda et al. (2015)	use of OSNs	Brand Awareness pWOM	Brand Awareness

Yuvaraj and Indumathi (2018)	Digital Marketing tools (SEO, Blogging, PPC, display ad, Social media, Mobile marketing, affiliate marketing, Emailing)	Branding	Branding
Luarn et al. (2015)	Brand posts on Facebook	Online Engagement (liking, commenting, & sharing behaviour)	Online Engagement (liking, commenting, & sharing behaviour)
Godey et al. (2016)	SMM efforts (entertainment, interaction, trendiness, customization, and WOM)	Brand Preference, Price premium, Loyalty	Brand Preference | Brand Loyalty
Treviño & Pineda Garelli (2018)	Consumers Motivations (information, entertainment, knowledge-seeking, social influence, social interaction, communication, and self-expression	develop relationship with brands on Online environment (SNS)	develop relationship with brands on Online environment (SNS)
Gomez et al. (2019)	SM brand involvement, SM brand communication impacts SM Brand engagement which impacts	Brand relationship quality	Brand relationship quality
Estrella-Ramon et al. (2019)	marketers' and users' content (MGC/UGC) -- quality, valence, & volume, on Facebook	Brand equity	Brand Equity

2.8.5. Consequential behaviour of brand preference

Table 2.10 provides literature review on various consequence of brand preference, along with purpose, hypothesis, method, consequential variables, context, and brief findings.

This table provide valuable information on various studies that has studied brand loyalty as a consequence of the brand preference. We take this forward and develops model with this last relationship.

Table 2.10: Consequence of brand preference

Author	Purpose	Hypothesis	Sample/Method	Consequences	Context	Findings
Hellier et al. (2003)	Develop a generic service sector repurchase intention model using consumer theory.	Brand preference ⟶ Repurchase intention	Personal superannouncement (Company A: 2,000 clients by age-agent); comprehensive auto insurance (Company B: Agent - 2,000 customers by experience; Direct - Company C: 1,000 and Company D: 1,923 consumers by experience).	Repurchase intention	car insurance and personal superannuation services	Perceived value dominates brand preference, whereas customer happiness and predicted switching cost are less important. The model explores how service quality, equity and value, customer

						happiness, prior loyalty, predicted switching cost, and brand preference affect repurchase intention
Chinomona and Pooe (2013)	To explore how brand service quality, contentment, and trust affect brand loyalty in South African commerce.	Brand preference ⟶ Brand loyalty	Four Vaal retail centers provided 151 replies.	Loyalty	Relationship of brand service quality, satisfaction, and trust with brand choice and loyalty in four Vaal shopping malls, representing South African retailing.	Brand service quality affects brand preference more via satisfaction. Strong correlation exists between brand choice and brand loyalty.
Ebrahim et al. (2016)	Customer brand experience affects brand preference and repurchase	Brand preference ⟶ Repurchase intention	Structured interviews were used to gather 351 English and Arabic questions from respondents in local locations like mail.	Repurchase intention (Loyalty)	Experiential view of brand preference in the Egyptian retail context and in mobile phones	Brand experience positively affects brand preference. Positive and strong link

	intention (loyalty).				product category, representative of a high-technology product.	between brand preference and repurchase intention
DAM (2020)	Examine how brand trust, perceived value, and brand preference affect branded phone purchase intention.	Brand preference ⟶ Purchase intention	285 consumers of electronic supermarkets in Vietnam	purchase intention	Ho Chi Minh City electronic store people buying branded phones (retail, not MC)	Brand trust dramatically increased brand choice and purchase intention.
Cuong, D. T. (2020)	To examine how brand happiness, trust, and preference affect laptop brand loyalty.	Brand preference ⟶ Brand loyalty	214 consumers of electronic supermarkets in Vietnam	Loyalty	Ho Chi Minh City electronic supermarket people purchasing laptops (retail, not MC)	Brand pleasure increased brand trust, preference, and loyalty. Brand trust boosts brand preference and loyalty. Brand loyalty improves with brand choice.

Hansopaheluwakan, et al. (2021)	The direct and indirect effects of brand equity and trust on buying interest through brand choice in Tangerang City bottled water customers.	Brand preference ⟶ Purchase intention	170 respondents from society of Tangerang City	Purchase intention	Bottled water industry in Tangerang City of Indonesia	Brand equity positively impacts buying interest through brand preference whether directly or indirectly. Brand preference from brand equity and trust increases purchase interest significantly.
Yasri et al. (2020)	To explore how price perception and appearance affect Gen Y's repurchase intention for SMEs' snack goods, and how brand experience and preference mediate this impact.	Brand preference, Brand experience ⟶ repurchase intention	237 consumers millennial generation in Indonesia responses to an experiment	Repurchase intention	Indonesian millennials (Gen Y) 18–35 and snack goods	Except for price perception and brand choice, three direct impacts in the proposed model are noteworthy. Consumer brand experience and brand choice showed strong mediation effects.

ERCİŞ, et al. (2021)	Identification of brand experience antecedents and effects on brand attitude, preference, and loyalty	Brand preference, brand attitude ⟶ Brand loyalty	389 customers of online TV streaming platform	Brand loyalty	Relationship between brand experience, attitude, preference, and loyalty to streaming TV platforms	Experience aspects "sense", "feel", and "think" impact brand choice, while "act", "think", "feel", and "relate" influence brand loyalty. Furthermore, brand attitude affects brand loyalty and brand preference.
Hanzaee and Asadollahi (2012)	To examine how brand equity affects brand choice and purchase intentions.	Brand preference ⟶ Brand intention	390 sporting goods consumers in Tehran	Brand intention	Iran's sporting goods brand equity-preference relationship	For sports items in Iran, brand equity is correlated with brand preference and purchase intentions, but brand awareness is not.

Cobb-Walgren et al., 1995	Brand equity affects customer preference and buy intentions.	Brand preference → Purchase intention	90 part-time MBA students having familiarity with hotel services	Purchase intention	Hotels pose substantial financial and functional risk, while domestic cleaners pose reduced risk.	Each category's equity-leading brand produced considerably more preferences and buy intentions.

2.9. Brand loyalty

Brand loyalty in the marketing area was initially explored academically by Copeland in 1923 (quoted in Kabiraj & Shanmugan, 2011). It was recognized that brand loyalty was limited to behavioral aspects. Subsequently, brand loyalty was assessed by considering characteristics such as purchase sequences, the proportion of total transactions, and the likelihood of making a purchase (Iglesias et al., 2011; Kabiraj & Shanmugan, 2011; Ramesh Kumar & Advani, 2005). This concept resulted in an emphasis on price, functionality, and quality in the marketing of products and services, with the anticipation that customers would establish a consistent buying behavior provided these variables satisfied their requirements. During the 1950s, brand loyalty emerged as a prominent study topic, unveiling an additional layer of loyalty. Multiple scholars, including Cunningham (1967), Day (1969), and Jacoby (1971), acknowledged the significance of the attitudinal components of brand loyalty, alongside the behavioral components. As the realization emerged that brands possess both an emotional and functional aspect, marketing tactics underwent a change towards emphasizing connections and the production of value (Iglesias et al., 2011). As per Wel et al (2011), brand loyalty encompasses two distinct components: the desire to repurchase a brand and a certain level of emotional connection and commitment towards the brand. Infact, Brand loyalty may be considered a specific instance of relationship marketing, in which the consumer has a strong emotional connection to the brand they consume (Fournier, 1998). Researchers have initiated an examination of the relational factors that are fundamental to the connection between a customer and a brand (A. Chaudhuri & Holbrook, 2002), which ultimately result in brand loyalty.

The development and evaluation of brand loyalty may be categorized into three distinct phases. In the past, there was excessive focus on the historical aspects of brand loyalty research, particularly on operational measures using technique-

oriented models. The focus was mostly on precise mathematical models such as Bernoulli, Markov chain, or linear learning models. (Sheth & Park, 1974). Loyalty, as described by researchers and marketers, is simply a customer's behavior. Therefore, until the 1950s, the sole indicator of consumer loyalty was the frequency and monetary value of recurrent purchases (Lu Ting Pong & Tang Pui Yee, 2001). The one-dimensional measuring approach of customer loyalty, which focuses solely on customer behaviors, might be criticized because the idea of customer loyalty extends beyond behavioral metrics. Dick and Basu (1994) contend that loyalty should not be perceived solely as a kind of repurchase behavior. This allows for a wide range of factors that may be analyzed as the outcomes of evaluative constructs in research on brand loyalty. Customer behaviors can be influenced by situational circumstances such as limited alternative options, significant costs associated with switching, or a predisposition towards inaction (Withey & Cooper, 1989). Approximately 75 percent of customers' purchase decisions are influenced by their mood and emotions (Gremler & Brown, 1996). This suggests that when measuring loyalty, it is important to include consumers' sentiments in addition to their recurrent purchasing behavior (Andreassen & Lindestad, 1998). However, the attitudinal metric alone is inadequate for assessing loyalty. Researchers examined consumer loyalty by concurrently combining both behavioral and attitudinal indicators (Hallowell, 1996). During this stage of loyalty building, a positive preference or attitude towards the brand is formed based on consistently satisfying experiences with the product or service. The brand loyalty displayed is focused on the level of preference for the brand.

According to Oliver (1999), brand loyalty is the strong dedication to consistently repurchase or patronize a preferred product or service in the future, even when faced with situational influences and marketing efforts that could potentially lead to switching to a different brand. This concept emphasizes the two aspects of brand

loyalty: measurable actions and attitudes. Jacoby and Chestnut (1978) proposed a preference-behavior model to assess brand loyalty by considering two key factors: behavior and attitude.

Consequently, academics and marketers now commonly view brands as comprising both a logical and an affective element. As a result, this has led to the development of increasingly intricate environments for researchers. As further study on the topic was conducted, other factors influencing brand loyalty emerged. Nevertheless, scholars have yet to establish a unanimous agreement over the specific factors that should be employed to assess brand loyalty. According to Fullerton (2003), commitment plays a significant role in brand loyalty and influences several elements including values, trust, and perceived quality. Subsequently, Brakus et al. (2009) identified brand experience as a significant factor that impacts brand loyalty indirectly by influencing brand personality. Authors have identified these two measures in the past decade, and the wide range of affecting elements significantly enhances the academic comprehension of brand loyalty.

During the subsequent phase, brand loyalty might be perceived as a complex and multifaceted concept. Brand loyalty is determined by several separate psychological processes and involves the use of multivariate metrics. Park (1996) asserted that both attitudinal loyalty and engagement have separate and significant impacts on the prediction of various indicators of behavioral loyalty. The path analytical model posits that customers must undergo a series of psychological processes in order to become loyal participants. These processes include: (a) developing a strong sense of involvement in their purchases, (b) maintaining steadfast attitudes towards resisting changes in brand preferences, and (c) cultivating a psychological commitment to a specific brand (Iwasaki & Havitz, 1998). Chaudhuri and Holbrook (2001) propose that behavioural loyalty, also

known as purchase, is characterized by repeated purchases of a particular brand. On the other hand, attitudinal brand loyalty involves a level of dispositional commitment based on a distinct value attributed to the brand. Brand trust has a crucial role in shaping brand loyalty (Ramesh Kumar & Advani, 2005). Brand trust is the level of confidence that consumers have regarding the dependability and intentions of a brand, particularly in instances when there is a risk involved (Andaleeb, 1992). Within the realm of consumer-brand interactions, this concept suggests that the brand takes on an engaged role as a relational partner. A successful approach to positioning the brand as an active player in the relationship, rather than a passive entity, is to highlight the ways in which brands are tailored and given vitality (Fournier, 1998). Perceived value, a critical determinant of loyalty, comprises two elements: the "get" component, representing the benefits a buyer obtains from a seller's offering, and the "give" component, encompassing the buyer's financial and non-financial costs incurred in acquiring the offering. (Dodds et al., 1991).

Nevertheless, they may also lead to significant perplexity, as both academics and marketers may struggle to ascertain which variables to employ when quantifying the degree of client loyalty towards a certain brand. Hence, this thesis will primarily concentrate on the one major criteria, namely customer perceived value and its various factors of manufacturer consumer brands in various industry, which have garnered significant scholarly interest in the last decade. The relationship between these elements and brand loyalty shall be demonstrated in the subsequent section.
Moreover, there exists a substantial body of research and literature about the concept of brand consumer perceived value and experience. Nevertheless, the connection between this concept and brand loyalty remains rather ambiguous. While several writers argue that it has a direct impact on brand loyalty, others have discovered that it is a variable that depends on other factors and does not have an

instant influence on brand loyalty by itself. This study seeks to demonstrate a correlation between factors of customer perceived value, overall customer perceived value, and brand loyalty.

But, before diving into the antecedents of brand loyalty, let's discuss the definition of the brand loyalty that the literature has produced till date. Summary of the definitions is provide in the table 2.11, wherein the source of the definition along with its context has been tabulated. Also, certain studies has adopted to these definitions as per their respective research questions and the context. We have tabulated some of these studies along with the channel paradigm studied therein.

In this table, we provide various definition starting from Jacoby and Chestnut (1978), where loyalty is referred to a biased behavior reaction over time exhibited by a decision-making unit towards one or more alternative brands from a given collection of brands and loyalty intentions refer to the inclination of consumers to either continue purchasing a product or service from a certain firm or switch to a rival. Further, Czepiel and Gilmore (1987) defined loyalty from a standpoint of attitudes, client loyalty has been regarded by certain studies as a distinct inclination to maintain a relationship with a service provider. With the evolution of the constructs, brand loyalty started being studied in various context, having evolved from offline retail and service context to online retail and service context and then to multi-channel and omnichannel context. Various definitions were proposed by various authors during this transition of the construct, which can be seen from the table while scrolling down the studies arranged in the chronological order.

For example, J. Lee et al. (2001) offered following definition while studying mobile phone service: Customer loyalty refers to the act of customers endorsing a company through positive word-of-mouth, having a higher likelihood of making purchases,

and frequently buying the company's products or services. Similarly, Tweneboah-Koduah and Farley (2016) offered definition for retail banking: Customer loyalty refers to the steadfast dedication and desire of consumers to consistently choose and support a certain product or service for a prolonged duration. Ball et al. (2006), in the context of a website, offered following definition: website loyalty refers to the degree to which consumers have a strong desire to maintain their relationship with a website and continue to support it. Swaid and Wigand (2012) provided the following definition in the context of an omnichannel retailing: consumer loyalty in an omni-channel system is affected by the smooth and uninterrupted experience, which is demonstrated by the efficient delivery of the goods. Similarly, M. Cotarelo et al. (2021), in the context of an omni channel retailing, offered following definition: Omni-channel loyalty refers to the integration of physical and digital loyalty marketing strategies to address the problems posed by emerging competitors and changing customer behavior

Table 2.11: Brand loyalty (BL) definitions

Author	Definition-context	Definition	Studies deployed these definitions	Channel paradigm
Jacoby and Chestnut (1978)	Offline retailing	Brand favoritism is the tendency of a decision-making unit to show biased behavior towards one or more specific brands from a given collection of brands over a period of time	He et al. (2012)	Mono - Offline
	Offline retailing	Loyalty intentions refer to the inclination of consumers to either continue purchasing a product or service from a certain firm, or switch to a rival	Ieva and Ziliani (2018)	Mono - Offline
	Offline retailing	Loyalty encompasses both "behavioural" and "attitude" dimensions	Wu and Tang (2022)	Mono - Offline
Czepiel and Gilmore (1987)	Offline retailing	From a standpoint of attitudes, client loyalty has been regarded by certain studies as a distinct inclination to sustain relationship	Z. Yang and Peterson (2004)	Mono - Offline
Parasuraman et al. (1991)	Offline retailing	The attitudinal dimension include factors such as the inclination to repurchase, resistance to purchasing from other companies, propensity to introduce and advocate for a company's unique product or service	Rasheed and Abadi (2014)	Mono - Offline
Pearson (1994)	Offline retailing	"Customers with a positive mindset towards the company, who are likely to make frequent purchases of the company's product/service, and who actively recommend the product/service to others."	Shahid Iqbal et al. (2018)	Mono - Offline
Dick and Basu's (1994)	Offline retailing	The correlation between an individual's relative attitude and repeat patronage shows the attitudinal and behavioral aspects of loyalty.	Frasquet and Miquel (2017)	Omni

	Offline retailing	The behavioral component pertains to the actions and behaviors exhibited by customers while making repeat purchases, and it highlights their preference for specific services or items	Rasheed and Abadi (2014)	Mono - Offline
Jones and Sasser (1995)	Offline retailing	Customer identification refers to the level of connection and affinity that a customer has with a company's people, services, or goods.	Mainardes et al. (2020)	Mono - Offline
Hallowell (1996)	Offline retailing	Loyalty is an individual's entire devotion to a brand or organization, characterized by a certain attitude	Hamouda (2019)	Mono - Offline
Macintosh and Lockshin (1997)	Retail store	Retail store loyalty is the favorable attitude that consumers have towards a retail shop, which includes its products, services, and retail technologies like Smart retail technology (SRT). Subsequently, this favorable view influences their future patronage of the store	Adapa et al. (2020)	Mono - Offline
A. Chaudhuri (1997)	Offline retailing	Brand loyalty refers to a customer's strong affinity for a specific brand, leading them to consistently choose that brand above others in a particular product category.	Maria et al. (2013)	Mono - Offline
Bloemer and Ruyter (1997)	Mobile payment	Mobile payment loyalty is the tendency to consistently favor and support the use of mobile payment methods over a period of time. It is influenced by psychological processes that lead to a strong commitment to using mobile payment services.	Wu and Tang (2022)	Mono - Offline
	Offline retailing	Store loyalty refers to the intentional and repeated behavior of a decision-making unit towards one specific store among a group of businesses. This behavior is influenced by psychological processes that lead to a strong commitment to the brand.	Collin-Lachaud and Mbaye (2021)	Mono - Offline

	Offline retailing	Offline loyalty refers to the biasness in customers' behavioral response towards one specific store among other retailers. It is a manifestation of psychological processes that lead to loyalty towards a certain retailer.	Wu et al. (2021)	Mono - Offline
Oliver (1999)	Offline retailing	Brand loyalty refers to a strong and unwavering dedication to consistently repurchase or support a preferred product or service in the future, even when faced with external factors or marketing strategies that may tempt one to switch to a different brand.	Wu and Tang (2022), Yeğin and Ikram (2022), Tu and Chang (2014), Maria et al. (2013), Shina and Zehir (2011)	Mono - Offline
Neal (1999)	Offline retailing	Customer loyalty, in terms of behavior, is the measure of how often a consumer chooses the same product or service within a specific category, compared to their total number of purchases in that category	Z. Yang and Peterson (2004)	Mono - Offline
Edvardsson et al. (2000)	Offline retailing	Loyalty is the customer's inclination or tendency to make repeat purchases from the same firm	Bapat (2017)	Mono - Offline
J. Lee et al. (2001)	Mobile phone service	Customer loyalty refers to the act of customers endorsing a company through positive word-of-mouth, having a higher likelihood of making purchases, and patronizing	Shahid Iqbal et al. (2018)	Omni
Chaudhuri and Holbrook (2001)	Offline retailing	Behavioral loyalty refers to the act of repeatedly purchasing a certain brand, whereas attitudinal brand loyalty involves a level of inherent devotion based on the brand's distinct value	Luarn & Lin, (2003)	Mono - Offline
Bennet and Rundle-Thiele (2002)	Offline retailing	The consumers' inclination towards a company is determined by a certain function and goes through a psychological process	Rasheed & Abadi (2014)	Mono - Offline

Lam et al. (2004)	Business-to-business service	Brand loyalty is the tendency of consumers to repeatedly select and buy products or services from a specific brand, especially when there are other attractive alternatives offered by rival companies.	Mutambik (2023)	Mono - Offline
	Offline service	Customer loyalty refers to the act of consistently choosing a particular service provider and actively promoting their services to others	Omoregie et al. (2019)	Mono - Offline
Harris and Goode (2004)	Online service	Retailer loyalty is the positive attitude and dedication of a customer that leads to repeated behavior towards that retailer	Wu and Tang (2022)	Omni
	Online service	Online loyalty refers to a customer's positive attitude and dedication that leads to repeated purchases from an online channel of a retailer that operates via multiple channels	L. W. Wu et al. (2021)	Omni
Ball et al. (2006)	Website	Website loyalty refers to the degree to which consumers have a strong desire to maintain their relationship with a website and continue to support it	X. Chen et al. (2022)	Mono - Online
Lenka et al., (2009)	Commercial banking	Loyalty may be described as the consistent behavior of customers regularly purchasing the same product or service from a certain firm, even when other options are available in the market	Hamouda (2021)	Mono - Offline
Swaid and Wigand (2012)	Omnichannel retailing	Consumer loyalty in an omni-channel system is affected by the smooth and uninterrupted experience, which is demonstrated by the efficient delivery of the goods	M. Cotarelo et al. (2021)	Omni
Khan and Mahmood (2012)	Offline retailing	Brand loyalty refers to the customer's unwavering dedication and strong connection to a brand, which is unlikely to be influenced by typical situations	Maheshwari et al. (2014)	Mono - Offline

Fatma and Khan (2023)	Corporate social responsibility	Brand loyalty is the tendency of people to continuously select and buy products or services from a specific brand, especially when there are other attractive alternatives	Mutambik (2023)	Mono - Offline
So et al. (2013)	Offline hotel service	A repetition of transactions serves as a demonstration of a consumer's loyalty to a certain brand.	Nikhashemi et al., 2016	Mono - Offline
Tweneboah-Koduah and Farley (2016)	Retail banking	Brand loyalty is the tendency of people to repeatedly purchase products or services from a certain brand, especially when there are other attractive alternatives	Mutambik (2023)	Mono - Offline
	Retail banking	Customer loyalty in the retail banking business pertains to the unwavering commitment and inclination of consumers to repeatedly select and endorse a certain product or service for a prolonged duration	Omoregie et al. (2019)	Multi
Levy and Hino (2016)	Retail banking	Loyal clients have a positive disposition towards the firm, make frequent purchases from it, and actively endorse it to others	Mainardes et al. (2020)	Omni
Rahim (2017)	Airline service	Brand loyalty is the tendency of people to continuously select and purchase products or services from a specific brand, even when there are other competing choices	Mutambik (2023)	Mono - Offline
Yoon and Park (2018)	Retail store	Retail store loyalty pertains to the favorable opinion that consumers hold toward a retail establishment's products, services, and retail technologies, such as Smart retail technology (SRT). Subsequently, this favorable view influences their further patronage of the shop	Adapa et al. (2020)	Multi
Omoregie et al. (2019)	Retail banking	Customer loyalty is a firm's ability to maintain customer patronage over competitors, establishing long-term repeat purchase relationships with a specific	Omoregie et al. (2019)	Multi

		brand, rather than just satisfying their needs, and continues to grow over time		
Mahfodz (2020)	Online retailing	Customer loyalty refers to the constant consumption of a certain brand, which reflects their actions and preferences towards that brand	Elareshi et al., (2023)	Omni
Urdea and Constantin (2021)	Online retailing	Customer loyalty refers to the constant consumption of a certain brand, which reflects their actions and preferences towards that brand		Omni
Sosanuy et al. (2021)	Ready-to-eat-food retail	The customer's inclination to revisit the business for further services		Omni
M. Cotarelo et al. (2021)	Omni channel retailing	Omni-channel loyalty refers to the integration of physical and digital loyalty marketing strategies to address the problems posed by emerging competitors and changing customer behavior	M. Cotarelo et al. (2021)	Omni

2.9.1. Nature of brand loyalty formation

Brand loyalty is defined as a steadfast and resolute dedication to consistently buy or endorse a selected product or service in the future, leading to recurrent acquisitions of the same brand (Knox and Walker, 2001; Oliver, 1999). Oliver (1999) delineated four stages of loyalty: cultivating positive attitudes towards a brand's information, fostering a deep affection for the firm, harboring behavioral intentions towards the brand, and eventually manifesting these intentions via tangible acts. The term has both an attitudinal component and a behavioral component. The attitudinal factor refers to a person's inclination towards specific retailers or brands and their emotional affinity towards them. The behavioral component, however, includes the intention to participate in certain acts, such as loyalty and advocacy, as well as the actual implementation of these actions in favor of the merchant. The definitions provided are derived from the publications of Dick and Basu (1994) and Liu-Thompkins et al. (2022).

Customer loyalty is mutually beneficial for companies and customers since it reduces the time consumers spend searching for product information and comparing things from various brands (Yang & Peterson, 2004). Furthermore, loyal clients of a certain brand frequently find it advantageous to utilize an alternate retail channel offered by an organization, such as internet purchasing. (Dholakia et al., 2005). The statement emphasizes the importance of client loyalty as a crucial factor in achieving success in e-commerce (Reichheld & Schefter, 2000).

An omnichannel approach may greatly enhance customer loyalty by offering a broader array of choices for customers to evaluate and appreciate the services provided by retail organizations (J. Li et al., 2017). Consumers are able to select their desired channels, which leads to a decrease in perceived uncertainty and an increase in the appeal of the retailer (Y. Li et al., 2018) and the rate at which

customers are retained (Bendoly et al., 2005). Consumers need uniform and uninterrupted experiences that surpass the constraints of different channels (Amar et al., 2019).

Furthermore, improved omnichannel integration expands the variety of data sources accessible to merchants, empowering them to utilize this knowledge to reinforce the loyalty of their consumer base. Therefore, when customers encounter a unified omnichannel shopping environment, they are more inclined to be content with the variety of services provided, resulting in heightened loyalty towards the merchant. By examining omnichannel from the customers' standpoint, rather than focusing solely on retailers' viewpoints as previous studies have done (Truong, 2021), it becomes feasible to measure brand loyalty by observing how a consumer consistently purchases a brand, encompassing both attitudinal and behavioral aspects of brand loyalty (Leckie et al., 2018).

Brand loyalty is the willingness of a consumer to pay a premium price for a specific brand within a particular product category and to actively endorse that brand to others (Giddens, 2002).

Brand loyalty is the state in which individuals have a strong and unwavering dedication to repeatedly purchasing or using a favored product or service, resulting in constant brand patronage (Knox & Walker, 2001; R. L. Oliver, 1999; Rundle-Thiele & Mackay, 2001),

Customer loyalty is a significant concept for businesses in the field of marketing research. Oliver (1999) proposed a model of loyalty that consists of four phases. First, consumers develop favorable attitudes towards the information offered by a brand. Second, they develop a like for the brand. Third, they establish behavioral

intentions towards the brand. Finally, they translate these intentions into real behaviors. Customer Loyalty not only helps companies, but also customers by reducing the time they spend searching for product information and assessing items from competing brands (Z. Yang & Peterson, 2004).

In addition, when consumers are loyal to a certain brand, they tend to find it convenient to select a different channel provided by a store, such as online. This highlights the significance of customer loyalty as a key factor in determining the success of e-commerce (Dholakia et al., 2005; Reichheld & Schefter, 2000).

This thesis operationalize brand loyalty based on the manner in which a consumer continues to purchase the brand providing experience through cross channel integration service during their purchase journey, incorporating both; attitudinal and behavioural components of a consumer's brand loyalty (Leckie et al., 2018).

Table 2.12: Antecedents of brand loyalty

Channel paradigm	Author	Purpose	Hypothesis	Sample / Method	Focal antecedents	Context	Findings
Mono - Online	Luarn and Lin (2003)	To explore how trust, customer happiness, and perceived value affect e-service loyalty (attitude and behavior).	Customer perceived value, trust, commitment (attitudinal) ⟶ Brand loyalty (behavioural)	90 each respondent from online travel service and video on-demand e-services, who attended exposition and symposium for e-commerce at Taiwan	Customer perceived value, trust	Relationship of customer perceived value, trust, commitment on behavioural loyalty in reference to the e-services in product categories of online travel and video-on-demand services	Trust, customer pleasure, perceived value, and commitment affect loyalty, with commitment having the greatest impact
Mono - Offline	Moosa and Hassan (2015)	Automobile value perception and its impact on customer satisfaction and brand loyalty.	Customer perceived value, functional value, epistemic value ⟶ Brand loyalty	198 user or driver of an automobiles with more than a year of experience in Jeddah, Saudi Arabia	Customer perceived value	Relationship between customer perceived, functional, and epistemic value of cars in Jeddah, Saudi Arabia	Functional value, epistemic, and consumer perceived value all affect brand loyalty, with perceived value having the biggest influence.

Mono - Offline	Nikhashemi et al. (2016)	To determine the significance of the perceived value of the shop brand in the connection between store qualities and consumer brand loyalty.	Customer perceived value ⟶ Brand loyalty	418 customers visiting hypermarkets such as Tesco, Aeon Big, Mydin, and Giant's in metropolitan Kuala Lumpur, Malaysia	Customer perceived value	Association between store attributes, consumer perceived value, and brand loyalty in Kuala Lumpur hypermarkets	Store attributes directly impact customer perceived value and loyalty to the store brand, and indirectly affect brand loyalty through customer perceived value, suggesting hypermarkets should understand customer perception for better marketing strategies.
Mono - Offline	Punniyamoorthy and Raj (2007)	To construct an empirical model for quantifying brand loyalty in English newspapers in Indian context.	Customer perceived value, customer satisfaction, trust, involvement, commitment ⟶ Brand loyalty	180 newspaper users (The Hindu, Deccan chronicle, and The New India express) from three major Indian cities of Chennai, Bangalore, and Trichy	Customer perceived value, customer satisfaction, brand trust	Relationship between attitudinal and behavioural construct of involvement, perceived value, trust, customer satisfaction with loyalty in reference to the newspaper	The study verifies the development of a model that incorporates multi-dimensional characteristics such as attitudinal commitment and behavioral purchase loyalty. influences of

						brands in three cities of India	involvement, perceived value, trust, customer satisfaction on loyalty.
Mono - Online	Rahi (2016)	To explore the relationship between client loyalty, switching costs, consumer perceived value, and online banking, and whether switching costs moderate this relationship.	Customer perceived value, internet banking ⟶ Brand loyalty	437 respondents familiar with internet banking services in the Pakistani cities of Lahore and Islamabad	Customer perceived value	Connection between customer perceived value, internet banking and loyalty in reference to the internet banking service	The study reveals that customer loyalty is significantly influenced by perceived value and internet banking, with switching costs playing a moderate role in this relationship.
Mono - Offline	Rasheed and Abadi (2014)	To explore how consumer loyalty in Malaysia's services industry is impacted by factors such as perceived value, trust, and service quality.	Customer perceived value, service quality, trust ⟶ Brand loyalty	Customers of several banks, insurance companies, and telecom providers in different parts of Kuala Lumpur responded based	Customer perceived value, service quality, trust	Link between service quality, trust and perceived value with customer loyalty in reference to the Malaysian banking, insurance, and	Positive correlation is found between perceived value and customer loyalty, perceived value and customer loyalty,

				on their latest transaction with the service provider		telecommunications services industries	and service quality and trust.
Mono - Offline	Tabaku (2013)	To examine how service quality, perceived value, and customer satisfaction affect brand loyalty in the service industry utilizing current literature.	Customer perceived value, customer satisfaction, service quality ⟶ Brand loyalty	Literature review	Customer perceived value, customer satisfaction, service quality	Relationship between brand loyalty in the service sector, focusing on service quality, perceived value, and customer satisfaction in reference with the existing literature.	Brand loyalty is influenced by perceived value, customer satisfaction, and service quality, with individual components' contributions varying in magnitude.
Mono - Offline	Tu et al. (2011)	In Taiwan, to examine service quality, customer perceived value, and loyalty satisfaction.	Customer perceived value, service quality, satisfaction ⟶ Brand loyalty	199 responses obtained from the visitors of TKEC store in Taipei area	Customer perceived value	Link between customer perceived value, service quality, satisfaction and brand loyalty in reference to the visitors of TKEC stores selling	The study discovered that customer satisfaction and perceived value are strongly correlated with service quality,

						products of computer, communication and consumer electronic in Taipei area of Taiwan	and that these variables also strongly correlated with customer loyalty for the sample.
Mono - Offline	Tu et al. (2013)	To explore relationship of corporate brand image, customer perceived value, and satisfaction with loyalty in shoe industry of Taiwan	Customer perceived value, service quality ⟶ Brand loyalty	208 responses obtained from the visitors of ASO stores selling shoes in Taiwan	Customer perceived value, service quality	Link between customer perceived value, corporate brand image, satisfaction and brand loyalty in reference to the visitors of ASO stores in Taiwan	Customer satisfaction and loyalty are significantly influenced by customer perceived value and corporate brand image, with satisfaction significantly influencing loyalty.
Mono - Offline	D. Yang and Wang (2010)	To explore generic and individual store brand loyalty, consumer perception of two-tier brands, and the impact of customer attitude	Customer perceived value, perceived quality, brand knowledge	338 randomly selected respondents from various supermarket gates in Shanghai, China, mostly	Customer perceived value, perceived quality brand knowledge	Relationship between perceived value, quality, store brand attitude and knowledge with individual and generic store brand	The study indicates that both low-priced and medium-priced store brands can effectively foster individual brand

		and brand knowledge on loyalty.	→ Brand loyalty	purchasing RT-Mart retail brands.		loyalty in reference to the two-tier brand stores of RT-Mart, terms as " RT-Mart" and "Thumb" at Shanghai, China	and store loyalty among customers.
Mono - Online	Z. Yang & Peterson (2004)	To examine how switching costs affect customer loyalty through satisfaction and perceived-value measurements.	Customer perceived value, perceived satisfaction → Brand loyalty	Through an online survey 235 responses were collected with 74% residing in US and balance in other countries	Customer perceived value, perceived satisfaction	Through an online survey 235 responses were collected in reference to the correlation between perceived value, satisfaction, switching costs, and loyalty	Companies should emphasize value and satisfaction to win consumers. Switching costs moderate the link between customer loyalty, contentment, and perceived value only when customer satisfaction or perceived value is above average

Mono - Offline	Tu and Liu (2014)	To examine how consumer commitment mediates corporate brand image-loyalty relationship.	Customer perceived value ⟶ Brand loyalty	170 customers of two Toyota dealers in the Taipei area provided responses for the study	Customer perceived value	Role of customer commitment as a mediating variable between association of corporate brand image with loyalty in reference to the Toyota dealers' customer in Taipei area of Taiwan	The study shows commitment partially mediates corporate brand image and consumer loyalty, proposing further investigation on additional aspects and theories
Mono - Offline	K. Chung et al. (2015)	To examine how gender and perceived value moderate consumer loyalty through brand image and customer happiness in a low-cost cosmetic firm.	Brand image, perceived value, satisfaction ⟶ Customer loyalty	234 respondents who have used low-priced cosmetic brands in Gyeongnam province of Korea were interviewed	Brand Image	Relationship between perceived value, brand image, customer happiness, and loyalty for Korean low-priced cosmetic brands	Through brand image and customer pleasure, perceived value boosts customer loyalty

Mono - Offline	Eid (2015)	To define Muslim customer perceived value (MCPV), investigate the connections between MCPV, customer satisfaction, customer loyalty, and Muslim customer retention, and create and evaluate a conceptual model of MCPV's effects on the travel and tourism sector.	Customer satisfaction, quality value, social value, emotional value ⟶ Customer loyalty	221 Muslim tourists	Customer satisfaction	Inter-relationship of all the dimensions of MCPV with customer loyalty and retention in reference to the travel and tourist industry in UK, Egypt and United Arab Emirates	All the focal constructs are antecedent of customer loyalty. The proposed MCPV model's attributes are crucial for retaining Muslim customers in the travel and tourism sector, and incorporating Islamic attributes alongside conventional dimensions can enhance satisfaction.
Multi	Yoo and Park (2016)	To investigate consumer value, pleasure, and loyalty online as premium firms increase mass customisation initiatives.	Customer satisfaction with customization, hedonic, utilitarian, creative achievement,	303 South Korean women who purchase online participated in a luxury brand representative's website survey.	Customer satisfaction with customizati on, hedonic, utilitarian, creative achievemen	Relationship of value, satisfaction with loyalty in reference to the online-experienced female of South Korea, through an imaginary-purchase on a representative-	The study found that satisfaction with customization, influenced by factors like hedonic, utilitarian, creative

			and social value → Brand loyalty		t, and social value	website of an imaginary luxury brand, "Burberry"	achievement, and social value, significantly impacts brand loyalty.
Mono - Online	Maria et al. (2013)	In order to develop Internet banking brand equity, this study looks at the correlations among perceived quality, trust, brand awareness / associations, and brand loyalty.	Trust, perceived quality, brand awareness → Brand loyalty, internet banking brand equity	210 customers of bank, using online banking in Portugal	Trust, perceived quality, brand awareness	Relationship of perceived quality, brand awareness, trust with brand loyalty, and internet banking brand equity in reference to the customers of international bank through online banking in Portugal	The study found that Internet banking brand equity is more influenced by perceived quality and brand loyalty than brand awareness and trust, with trust lowering perceived risks. Perceived quality positive impact brand loyalty

Mono - Offline	He et al. (2012)	To presents a study on a social identity viewpoint on the correlation among customers and brands. It combines brand identity and identification with factors such as value, trust, and satisfaction to predict brand loyalty.	Brand identity Trust, satisfaction, value ⟶ Brand loyalty	Interview with mall-intercepted visitors comprising of 201 female skincare customers and 192 mixed-gender mobile customers across five departmental stores n Taipei, Taiwan	Trust, satisfaction, value	Relationship between brand identity and traditional antecedent of brand loyalty (trust, satisfaction, value), and that of the latter with brand loyalty in reference to the mall visiting customers of skincare and mobile product category in Taiwan	The research confirms the significant impact of brand identity and identification on perceived value, satisfaction, and trust, which suggests that social identification can integrate with other perspectives, and emphasizes the mediation effect of brand identification on loyalty development.
Mono - Offline	Sahin (2011)	To explore influence of brand experiences on establishing enduring relationship among brand and consumer, characterized by	Brand trust, brand experience, satisfaction ⟶ Brand loyalty	258 automobile owners residing in the metropolitan area of a large city in Istanbul, Turkey	Brand trust, brand experience, satisfaction	The relationship between brand experiences, satisfaction, trust, and loyalty among	Brand experiences, satisfaction, and trust boost brand loyalty

		trust, satisfaction, and loyalty.				Istanbul-based car owners	
Mono - Offline	Maheshwari et al. (2014)	To explore relative relationships among value, brand experience and brand commitment (affective and continuance commitment), and brand loyalty within automotive sector	Experience, affective commitment, continuance commitment ⟶ Brand loyalty	232 car owners between the ages 40-70 in Oslo, Norway	Experience, affective commitment	To assess relationship of brand experience, brand commitment and brand loyalty in reference to the car owners aged between 40 and 70 years in Oslo, Norway	Brand experience significantly influences brand loyalty, and affective commitment influences it both individually and as a mediator. However, there is no significant relationship between continuance commitment and brand loyalty

Multi	M. Cotarelo et al. (2021)	To explore association of intensity (perceived consistency and seamlessness of omnichannel experience) with customer perceived value, and their subsequent impact on on satisfaction and loyalty.	OC Shopping value, OC Intensity (perceived consistency and seamlessness) ⟶ Loyalty, and satisfaction	285 customers who made at least one omni-channel purchase by purchasing online and collection at store in Spain through exponential-type snowball method	OC Shopping value, OC Intensity (perceived consistency and seamlessness), Satisfaction	Relationship of intensity, perceived value, satisfaction and loyalty in reference to the omni-channel purchase where online purchase is made and collection is done at store in Spain	The data showed a clear association between intensity, perceived shopping value, contentment, and loyalty.
Multi	Frasquet and Miquel (2017)	To assess the impacts of multichannel integration on physical and online consumer loyalty and offer a valid metric.	Channel integration (reciprocity, coordination), satisfaction ⟶ Online / Offline loyalty	761 multichannel apparel shoppers analyzed Spain and UK retail sectors.	Customer satisfaction	Relationship of reciprocity and coordination dimension of cross channel integration with online and offline loyalty in reference to the retail apparel sector in Spain and United Kingdom	Channel integration, involving reciprocity and coordination, positively impacts both offline and online loyalty through satisfaction, partially mediating the relationship.

Omni	X. Chen et al. (2022)	To explore how omni-channel collaborative marketing affects consumer loyalty and how the shopping experience mediates.	Omni-channel shopping experience ⟶ Customer loyalty	550 Agri-fresh produce omni-channel customers	omni-channel shopping experience	Relationship of omnichannel collaborative marketing, omnichannel customer experience, and omnichannel customer loyalty in reference to the omnichannel customers of new agricultural products	The study reveals that price and service coordination in omni-channel collaborative marketing strategy positively impact the shopping experience and customer loyalty. The omni-channel shopping experience significantly influences the correlation between omni-channel collaborative marketing and customer loyalty.

Multi	Z. Chen, sun and Liu (2022)	The study uses exchange theory to link web customization to customer decisions like website loyalty and buy intention, examining the moderating influence of privacy concerns.	Web personalization, trust, reactance, privacy concerns → Website loyalty	270 Chinese respondents having experienced personalized service while shopping online through consumer panel platform called Sojump	Web personalization, Privacy concerns, trust, reactance	Relationship between web personalization, trust, reactance, privacy concerns and website loyalty in reference to the Chinese online consumers consumed personalized services	The study reveals that privacy concerns moderate the relationship between web personalization and website loyalty, with less privacy concerns enhancing trust and more privacy concerns affecting loyalty through psychological reactance, emphasizing the need for careful consideration.

Multi	J.H. Kim et al. (2009)	E-satisfaction is examined in connection to buying environment factors unrelated to pricing or product information. Additionally, the study seeks to determine how e-satisfaction and e-loyalty relate.	Convenience, customization, information, communication, website aesthetic, e-satisfaction ⟶ e-Loyalty	366 female and male college students from three institutions (East coast, Midwest, and West coast) browse for fashion online.	Convenience, information, communication, entertainment value, customization, e-satisfaction	Association of convenience, customization, information, communication, website aesthetic, e-satisfaction, and e-Loyalty in reference to the internet fashion apparel shopping web sites consumers	Convenience, online look, and entertainment value directly affect e-satisfaction, which positively affects e-loyalty.
Multi	Adapa et al. (Adapa et al., 2020)	To examine influence of customer perception of value in smart retail technologies, highlighting how complexity, advantage, novelty, and danger influence their loyalty and intent to use these technologies.	Perceived complexity, perceived advantage, perceived novelty and perceived risk, consumers' perceived shopping value, ⟶ Retail store loyalty, intention to adopt smart retail	338 Mturk-experienced online consumers with smart retail technology	Complexity, novelty, advantage, risk, shopping value	Relationship of retail store loyalty, perceived complexity, advantage, novelty, and risk, consumer shopping value, intention to adopt smart retail technology (SRT) in reference to the actual online shoppers having prior multiple experience of using	Customer-perceived SRT complexity, novelty, advantage, and risk improve consumer experience. SRT features' novelty helps create favorable shopping value perceptions, which contribute to loyalty and continued use.

			technology (SRT)			smart retail technology	Shoppers' loyalty increases with perceived purchasing value.
Mono - Offline	Omoregie et al.(2019)	The increasing number of banks in Ghana's banking industry has intensified competition, prompting this paper to explore factors influencing retail banking customers' loyalty intentions.	Satisfaction, service quality, trust, corporate image, value ⟶ Loyalty	565 offline customers (waiting in a queue of to be served inside the bank) of the top performing banks in terms of customer deposits	Satisfaction, service quality, trust, value	Relationship between satisfaction, service quality, trust, corporate image, value and loyalty in reference to the customers of the top performing banks in terms of deposit in Ghana	Satisfaction, service quality, and trust significantly impact loyalty, with corporate image affecting satisfaction and trust but not loyalty

Multi	Shahid Iqbal et al. (2018)	To investigate the influence of technology-based services, namely self-service technologies (SSTs), on customer satisfaction, loyalty, and behavioural intentions in the service sector of Pakistan.	SST service quality, customer satisfaction ⟶ Behavioural intention, customer loyalty	238 SST users in Pakistan's largest cities were surveyed online via email and social media	Functionality, enjoyment, security, convenience, customizati, customer satisfaction	Association of SST service quality, customer satisfaction with behavioural intention, and loyalty in reference to the SST users of big city of Pakistan	SSTs service quality was positively and significantly correlated with customer loyalty, behavioral intentions, satisfaction, and SSTs users' loyalty.
Multi	Bustamante and Rubio (2017)	To develop and verify a metric for assessing the quality of customer experience inside a physical retail environment, referred to as in-store customer experience (ISCX).	In-store customer experience (Cognitive, affective, social, physical) ⟶ Satisfaction, loyalty	32 undergraduate students from university of Madrid in Spain volunteered for qualitative study. For quantitative study, 800 customers at stores exit at three each multi-brand and single-brand retail stores provided responses	Cognitive, affective, social, physical, and total customer experience, satisfaction	The study shows a strong direct association between ISCX and shop loyalty and an indirect influence on customer satisfaction, and that experience positively impacts loyalty in reference to the 32 students and 800 customers of retail stores in Spain	The study shows a strong direct association between ISCX and shop loyalty, with an indirect influence on customer pleasure, and that experience increases loyalty.

Multi	Y. Li et al. (2018)	Focusing on privacy concerns and dishonesty, the study explores how online channel media richness affects customers' online loyalty, moderated by cross-channel integration	Perceived media richness, deception, Privacy concern ⟶ Online loyalty	258 consumers, experienced in purchase from a multi-channel retailer, responded through online survey platform of Sojump in China	Perceived media richness, deception, Privacy concern	Link between perceived media richness, deception, privacy concern, and online loyalty in reference to the multi-channel consumers in China	Online channel media richness reduces privacy concerns and perceived deception, while enhancing online loyalty, with cross-channel integration complementing this effect.
Multi	Frasquet et al. (2017)	The research explores the interplay between offline and online loyalty, its impact on brand trust and attachment, in a cross-cultural context.	Brand trust, attachment, usefulness, ease of use ⟶ Online / offline Loyalty	761 multichannel apparel shoppers in two countries (UK and Spain) responded in English and Spanish through online survey	Brand trust, attachment, usefulness, ease-of-use	Association between brand trust, attachment, usefulness, ease-of-use, and loyalty in reference to the multichannel apparel shoppers in UK and Spain	Offline loyalty significantly influences online loyalty, and it is further enhanced by brand trust and attachment. These correlations are consistent throughout the two distinct civilizations. Usefulness impacts online loyalty in case of Spain and ease of

							use impacts online loyalty in the case of UK
Multi	Mutambik (2023)	This study aims to enhance our comprehension of the variables that influence the customer experience and determine the levels of loyalty towards open banking brands and applications.	Ease of use, perceived value, quality of support, reliability, perceived risk, innovation ability, customer experience (cognitive, affective) → Customer loyalty	2590 open banking users of six established brands in Saudi Arabia and other 7 countries through apps	Ease of use, perceived value, quality of support, reliability, perceived risk, innovation ability, customer experience (cognitive, affective)	Relationship between ease of use, perceived value, quality of support, reliability, perceived risk, innovation ability, customer experience (cognitive, affective), customer loyalty in reference to the open banking app users of six established brands in Saudi Arabia and seven other countries	The study reveals that factors such as ease of use, perceived value, support quality, reliability, perceived risk, and innovation ability influences customer experience. These factors, in turn, actively influence the level of customer loyalty

Omni	K. Kim and Ha (2023)	The study explores the relationship between service quality, customer satisfaction, and loyalty intents in hotel Online to Offline (O2O) commerce, examining temporal, carryover, and interplay relationships.	Website, hotel satisfaction ⟶ Website, hotel loyalty intentions	544 (on pre-purchase) and 473 (on actual experience) participants who had both made an online reservation at an online travel agency, and visited 5-star hotels to stay there for at least 2 days in mainland China	Website, hotel satisfaction	Temporal, carryover, and interaction link between service quality, hotel & website happiness, and loyalty in pre- and post-purchase stages of mainland O2O customers. China	The study found a dynamic relationship between attribute-level ratings and satisfaction in both tourism websites and hotels. Online tourism website attributes are more dynamic than hotel attributes. The satisfaction-hotel loyalty intentions linkage strengthens during consumption episodes, while the hotel satisfaction-tourism website loyalty intentions linkage weakens. The association of satisfaction with

							loyalty intentions is stronger in the online tourism sector but weaker in the hotel sector.
Omni	Zhou and Yu (2022)	A theoretical framework was developed and verified using 401 valid samples from Phoenix Ancient Town, China, to examine visitor engagement, perceived value, satisfaction, and destination loyalty.	Tourist satisfaction, social, emotional, functional value, tourist engagement ⟶ Destination Loyalty	401 tourists who had just finished visiting Phoenix Ancient Town, China provided responses to the questionnaire	Tourist satisfaction, social, emotional, functional value, tourist engagement	Relationship between tourist engagement, satisfaction, social value, emotional value, functional value, and destination loyalty in reference to the responses received from the tourist on their return from the Phoenix Ancient town of China	The research confirms the marketing psychology logic chain of engagement-value-evaluation/behaviour in tourism destinations, showing that tourist engagement directly influences

							destination loyalty but not satisfaction. It indirectly creates functional and emotional value, but not social value.
Omni	Bapat (2017)	This paper investigates satisfaction and loyalty in a multi-channel banking environment, encompassing both branch and electronic banking channels for customer interaction.	Perceived ease of use, branch service quality, satisfaction ⟶ Loyalty	229 respondents, which used a convenience sampling approach through intercepts and interviews held at bank branches	Relationship between perceived ease of use, branch service quality, satisfaction, and loyalty in reference to the interview with customer at bank branch	Relationship of perceived ease-of-use, branch service quality, satisfaction, with loyalty in reference to the bank customers at bank	The perceived ease of use and branch service quality increase satisfaction and loyalty.

Omni	L. W. Wu et al. (2021)	This study examines the potential benefits for multichannel retailers by exploring the relationship between multichannel integration, perceived affordances, and their impact on economic and consumer values, satisfaction, and loyalty.	Multichannel integration, perceived affordances, economic, relational value, online/offline satisfaction ⟶ Offline / online loyalty	387 customers responded at the exist of certain multichannel apparel retailers spread across northern, central, and southern Taiwan, namely, Taipei, Taichung, and Tainan	Multichannel integration, perceived affordances, economic, relational value, online/offline satisfaction	Relationship between Perceived affordances, economic, relational value, online/offline satisfaction, and online/offline loyalty in reference to the visitors of apparel stores spread across Taiwan, except eastern provinces	The study affirms the positive influence of multichannel integration and perceived affordances on economic and relational values, positive impacts of economic and relational values on satisfaction; the effect of online and offline satisfaction on both online and offline loyalty, and examines how offline satisfaction and loyalty transfer.

Multi	Ieva Ziliani (2018)	This paper explores customer exposure patterns through frequency segmentation and their relationship with loyalty intentions and demographic characteristics.	Patterns of touchpoint exposure ⟶ Online / offline loyalty	4,000 customers employed through online survey in a supermarket retail setting of Italy using the Nielsen online consumer panel households on grocery shopping	Economic, relational value, online/offline satisfaction	Studying customer exposure patterns through frequency segmentation and their relationship with loyalty intentions and demographic characteristics in reference to the supermarket retail household grocery consumer	Six customer segments are identified based on touchpoint exposure intensity and types, with sex, age, shopping role, and location influencing membership. Higher exposure to touchpoints leads to higher loyalty intentions.

Multi	L. W. Wu; and Tang (2022)	The study examines customer path design, relationship investment, structural assurance, and perceived ubiquity to determine the link between retailer trust, mobile payment trust, retailer loyalty, and mobile payment loyalty.	Perceived ubiquity, Trust in mobile payment, Trust in retailer, customer journey design, relationship investment, structural assurance ⟶ Loyalty to retailer and mobile payment	358 mobile payment users (at least once in past six months) at the exit of the several apparel stores (convenience stores, supermarkets, and department stores) in Taichung city of Taiwan,	Linkage between perceived ubiquity, trust in mobile payment, trust in retailer, customer journey design, relationship investment, structural assurance, and retailer loyalty and mobile payment for Taiwanese clothing shop mobile payment users.	Relationship of customer journey design, relationship investment, structural assurance, and perceived ubiquity with trust and loyalty in Taiwanese fashion shop mobile payment customers.	The study shows that customer path design, relationship investment, structural assurance, and perceived ubiquity boost store and mobile payment confidence and loyalty.

Omni	Hamouda (2019)	To conduct an empirical analysis of the correlation between the quality of omni-channel integration (IQ), the perceived value of omni-channel services (PV), customer happiness, and customer loyalty in the banking industry.	Integration Quality, perceived value, satisfaction ⟶ Customer loyalty	395 omni-channel experienced (used at least 3 channels of website, offline and mobile) bank customers of seven commercial banks in Tunisia provided responses to the web-based questionnaire through an email	Integration Quality, perceived value, satisfaction	Association of integration quality, perceived value, satisfaction with customer loyalty in reference to the customer of the seven commercial banks in Tunisia, having experience of using at least three omnichannel channels of website, offline, and mobile while interacting with the bank in last one year	The study reveals that high-quality omni-channel banking integration boosts customer satisfaction and loyalty, with a positive relationship between PV and omni-channel IQ, highlighting the potential for increased customer loyalty.
Omni	Mainardes et al. (2020)	This study examines how service channel fluency and integrated interaction quality promote banking industry attitudinal loyalty through positive affect	Integrated interaction quality, perceived fluency, positive affect experience ⟶ Attitudinal loyalty	337 Brazilian bank clients provided responses for the study through online platform	Positive affect experience	Association of integrated interaction quality, perceived fluency, and positive affect with attitudinal loyalty in reference to the Brazilian bank clients	The study shows that integrated interaction quality positively influences bank client loyalty, with perceived fluency having no significant direct effect. Positive affect mediates

							these relationships.
Omni	Collin-Lachaud and Diallo (2020)	The study investigates the impact of in-store mobile use on store loyalty, examining whether social influence moderates these relationships.	In-store smartphone use, utilitarian, hedonic, symbolic store value → Store loyalty	862 actual customers from market research company panel in France, using social influence through instore mobile phone use	In-store smartphone use, utilitarian, hedonic, symbolic store value	Relationship between In-store smartphone use, utilitarian, hedonic, symbolic store value, and store loyalty in reference to the actual customers using social influence through in-store mobile phone, in France	The study reveals a positive but weak effect of in-store smartphone use on loyalty, mediated by store's hedonic and symbolic value dimensions, and moderated by social influence, with stronger effects at lower social influence.

Multi	Palacios-Marques et al. (2016)	This research explores how online and multi-channel offerings affect perceived value, customer loyalty, satisfaction, and switching costs in customer-centric hotels.	Personalized online service, perceived value, trust, satisfaction, switching cost ⟶ Attitudinal loyalty	420 hotel users with Internet access that are travelling for pleasure, business or both responded the questionnaires through personal interviews in tourist country of Spain	Personalized online service, trust, satisfaction, cost	Relationship between personalized online hotel service, traditional multichannel service, perceived value, trust, satisfaction, switching cost, and attitudinal loyalty in reference to the 420 users of hotel for pleasure and business purposes in the tourist country of Spain	This paper suggests that personalized online service in hotels enhances service quality, efficiency, reduces information asymmetries, and builds customer loyalty through customization and innovation.
Multi	Elareshi et al. (2023)	The study examines how social media marketing increases online customer loyalty in Jordanian banks using user experiences and perceived ease of use.	social media marketing, customer experience, perceived ease of use, usefulness ⟶ Customer loyalty	329 customers of bank of Jordan in Amman provided responses through online survey on the online banking services, as per their experience with the services	Social media marketing (electronic word of mouth (EWM), informativeness (INF), and social media	Relationship between social media marketing (electronic word of mouth (EWM), informativeness (INF), and social media features (SMF)), customer experience, perceived ease of	The study reveals that the behavioural intention is influenced by perceived usefulness and ease of use of online banking services, which in turn influences

					features (SMF)), customer experience, perceived ease of use, usefulness	use, usefulness, and customer loyalty in reference to the online banking services of bank of Jordan, Amman	customer loyalty. It suggests e-marketing significantly impacts customer loyalty, emphasizing the significance of SMM
Omni	Jo (2023)	This study examines Online for Offline (O4O)-commerce platform endorsement and loyalty elements.	Channel accessibility, perceived multichannel quality, customization, relative advantage, price fairness, reputation ⟶ Recommended intention, loyalty	204 experienced O4O provided responses in English and Korean in Korea	Channel Accessibility, Perceived MC Quality, customization, relative advantage, price fairness, reputation	Channel accessibility, perceived multichannel quality, customization, relative advantage, price fairness, reputation, recommended intention, and loyalty in reference to the experienced O4O user in Korea	The study found that perceived multichannel quality, customization, and accessibility influence relative advantages, while recommended intention and loyalty remain unaffected, and loyalty is linked to reputation.

2.9.2. CPV Antecedent of brand loyalty

Table 2.12 provides various antecedents of brand loyalty in the context, which comprises of various elements of customer perceived value. This literature captures various important information from the studies such as purpose of the study, hypothesis developed, sample and method deployed in the study, antecedents, context, and brief findings.

From the table it can be seen that various there are studies that have studied various dimensions of perceived value such as trust, overall customer perceived value, service quality, knowledge, satisfaction, brand image, hedonic, utilitarian, and social value, perceived quality, awareness, brand experience, shopping experience, web personalization, privacy, customization, information, communication, entertainment value, e-satisfaction, perceived risk, shopping value, functionality, enjoyment, convenience, cognitive, affective, and social values, usefulness and ease of use, quality of support, reputation. These dimension provides valuable insights on the elementss of CPV that influences brand loyalty in the context of multichannel.

We take guidance from these studies and develop a model by incorporating various customer perceived values as an antecedents of loyalty, directly or indirectly. The focal factors of customer perceived values are awareness, convenience, trust, control, risk, seamless experience, ubiquitous personalization, customer empowerment, service quality, emotional response, and reputation. Along with these factors, also overall customer perceived value has been incorporated in our model. Those we seek support of the literature to develop the model around customer perceived value in the discussion in this section, but the same shall be studied in different context than done earlier.

2.10. Brand preference with brand loyalty

The association has been discussed in section 3.8.1.4 and also literature on consequence on brand preference provided in the table 2.10 provide adequate evidence that the relationship between the two exists in the literature. We intend to extend the same relationship in different context.

2.11. Methodology adopted and theory adopted by the studies in the context

The literature review conducted during the course of the current research helped gain insight on the kind of theories adopted by various studies. The studies comprise of 875 research papers and theses from the period starting 2002 till end of 2023. Some of these theories used were need fulfillment theory (Kuruzovich et al., 2008); The technology acceptance model (TAM), the theory of reasoned action (TRA), the theory of planned behavior (TBB) (S. Ha & Stoel, 2009); Technology adoption and diffusion theory and adaptation level theory Montoya-Weiss et al., 2003; Negativity bias theory (Emrich et al., 2015). The frequency of the theories deployed by these studies are tabulated in the table 2.13 and list of such studies are enlisted in the able 2.14

Table 2.13: Frequency of theories used in the extant literature on multichannel

Theories adopted by the studies	Frequency
Not specified	27
The technology acceptance model (TAM)	12
The theory of planned behavior (TPB)	10
Unified Theory of Acceptance and Use of Technology (UTAUT) model	9
SOR (Stimulus-Organism-Response)	8
The theory of reasoned action (TRA)	8
Roger's innovation diffusion theory (IDT)	7
Self-congruity theory	2

Adaptation level theory	1
Cognitive dissonance theory	1
Construal level theory	1
Consumer empowerment theory	1
Theory of cognitive dissonance	1
Group entitativity theory	1
Customer journey model	1
Uncertainty reduction theory	1
Information system success model	1
Dynamic capabilities theory	1
Consistency theory	1
Self-efficacy theory	1
Self-regulating attitude theory	1
perceived value theory	1
Exchange theory	1
Reactance theory	1
Cognitive evaluation theory	1
Flow theory	1
Information processing and uncertainty reduction theories	1
Perceived risk theory	1
Media richness theory (MRT)	1
Behavioral decision theory	1
Need fulfillment theory	1
Status Quo Bias Theory	1
Negativity bias theory	1
Channel complementarity theory	1
Anticipated utility theory	1
TBA	1
Procedural justice theory	1
The Brand Resonance Model	1
Attitude-behavior theory	1
Triangular theory of love	1
Sheth–Newman–Gross model or the Theory of Consumption Values (TCV)	1
Push-Pull-Mooring (PPM) framework	1
Privacy calculus theory	1
Uses and gratifications theory (UandG)	1
Schema theory	1
Perceived risk theory	1
Theories on value dimensions	1

Value-based Adoption Model	1
Self-determination theory	1
Trust transfer theory	1
Sensory marketing and Dual Coding Theory	1
Social cognitive theory (SCT)	1
Sensory marketing and Dual Coding Theory	1
Accessibility-diagnosticity theory	1
SERVQUAL	1
Expectation–confirmation theory	1

Table 2.14: List of extant literature on multichannel along with the theories adopted

Author Name & Year	Factors (of interest) investigated	Core Theory Applied
Kuruzovich et al., 2008	Price information retrieval, search effort, referred purchase	Need fulfillment theory
Ha & Stoel, 2009	customer service, privacy, security, atmospheric, experiential, usefulness, trust, enjoyment, e-shopping intention	The technology acceptance model (TAM), the theory of reasoned action (TRA), the theory of planned behavior (TBB)
Montoya-Weiss et al., 2003	Security Risk, Service Quality, online channel use	Technology adoption and diffusion theory and adaptation level theory
Trenz et al., 2020	convenience, risk, product uncertainty, online shopping experience, risk propensity	Not specified
Emrich et al., 2015	variety, convenience, risk, channel preference, channel patronage intention	Negativity bias theory
Choudhury & Karahanna, 2008	convenience, trust, efficacy of information acquisition, relative advantage of an electronic channels, behaviour intent: web	Innovation diffusion theory
Mpinganjira, 2014	Personalization, ease of communication, privacy protection, repeat purchase intention	Not specified

Kleinlercher et al., 2020	Involvement, convenience, time savings, online/physical store shopping experience, assortment attractiveness, webrooming, purchase	Anticipated utility theory
E. Kim et al., 2017	Perceived Risk, Convenience (location), Product involvement	Diffusion-of-Innovations (DOI) theory
Singh & Srivastava, 2019	perceived usefulness, perceived risk, perceived self-efficacy, purchase intention, actual purchase behaviour	TPB, TAM
Cotarelo et al., 2021	seamless and consistent omni-channel experience (intensity), satisfaction, loyalty	Not specified
Aw, 2019	**Shopping motivation** - Efficiency shopping, bargain hunting, variety seeking. **Webrooming**	Information processing and uncertainty reduction theories
Lee, 2020	Perceived convenience, customer satisfaction, intention to re-visit OMC	Not specified
Rehman et al., 2022	Brand experience, functional benefits, attribute perception, price perception, appearance perception, appearance perception, brand repurchase intention, brand preference	Self-congruity theory
Marta Frasquet & Miquel, 2017	Overall satisfaction, online/offline loyalty	Not specified
Juaneda-Ayensa et al., 2016	Personal innovativeness, effort expectancy, personal security, purchase intention	Unified Theory of Acceptance and Use of Technology (UTAUT2) model
Fernandes & Barfknecht, 2020	Informative content, Perceived ease of use, trust, entertainment, Hedonic & Utalitarian shoppers value	The extended TAM, specifically the TAM3, and perceived value theory
Kokku, 2021	shopping value, utilitarian and hedonic benefits, channel patronage	Not specified
Tyrväinen et al., 2020	cognitive and emotional customer experience, personalization, word of mouth, repeat purchase intention	Not specified
J. J. Wu et al., 2018	Trust, intention to recommendation	Schema theory

Li et al., 2018	Retailer uncertainty, identity attractiveness, showrooming, loyalty	Push-Pull-Mooring (PPM) framework
Le & Nguyen-Le, 2020	Customer empowerment, customer experience, trust, variety-seeking, patronage intention	Stimulus-organism-response (SOR) framework
Mishra et al., 2022	Customer empowerment, satisfaction, unreliability (risk & trust), consumer retention	SOR
Jayasingh et al., 2022	Performance expectancy, Effort expectancy, Facilitating conditions, Hedonic motivation, perceived value, Omni-channel shopping intention	UTAUT2
Silva et al., 2018	usefulness, ease of use, and compatibility, risk, customer experience, future use intention	TAM, TRA, Theory of diffusion of innovations, TBA, and Attitude-behavior theory
Gao & Fan, 2021.	Offline & Online experience, and satisfaction	Not specified
Goraya et al., 2022.	perceived empowerment, perceived assortment structure, perceived benefits	Self-determination theory
Xiaoxia Chen et al., 2022	Experience, loyalty	SOR
Rodríguez-Torrico et al., 2019	affective (M-satisfaction) and cognitive (M-trust and M-convenience), M-repurchase intention	SOR
Sun et al., 2020	satisfaction, omnichannel self-efficacy, Mobile identity, Omnichannel service usage	Social cognitive theory (SCT)
Xinyu Chen et al., 2022	personalization, trust, reactance, privacy concerns, website loyalty	Exchange theory, Reactance theory
Abbasi et al., 2023	utilitarian and hedonic performance confirmation and trust (System, Service and information qualities), attractiveness of alternatives, continuation intention	SOR and information system success model
Chatterjee et al., 2021	choice, content consistency, and customization, perceived benefits, data privacy, security, risk, OMC use intention	Roger's innovation diffusion theory (IDT) and privacy calculus theory

Gasparin et al., 2022	maximize the utility of a purchase, reduce choice uncertainty or regret, and/or satisfy curiosity about a purchase and pre-purchase information search behavior, repurchase intention, word of mouth	Customer journey model
Haridasan et al., 2021	Product fit uncertainty, purchase involvement, external information search, alternatives attractiveness, multichannel self-efficacy, switching costs, cross-channel switching intention	Uncertainty reduction theory
Swoboda & Fränzel, 2022	Omnichannel retailer quality, Online shopping experience, pre-purchase, purchase	Accessibility-diagnosticity theory
Min Zhang et al., 2020.	psychological distance and perceived uncertainty, purchase intention	Construal level theory
Kasilingam & Krishna, 2022	Convenience, intention to uee and willingness to pay premium	TRA, theories on value dimensions, Sheth–Newman–Gross model or the Theory of Consumption Values (TCV), IDT, TPB, Value-based Adoption Model and Unified Theory of Acceptance and Use of Technology
Wong & Haque, 2022.	Brand love, trust, purchase intention, word of mouth	The Brand Resonance Model, triangular theory of love
Min Zhang et al., 2018	Empowerment, trust, patronage intention	SOR
Cattapan & Pongsakornrungsilp, 2022.	perceived risk, customer satisfaction, purchase intention	SOR
Junbin & Xinyu, 2022	**channel control experience**: perceived channel attribute familiarity, channel type matching, and cross-channel access convenience; **consistent interactive experience**:	EDT, Consistency theory, self-efficacy theory, self-regulating attitude theory

	information cross channel consistency and cross-channel service support	
Levin et al., 2005	Product attribute, consumer attribute, shopping stage, shopping preference	Not specified
Lim, 2015	perceived value, social factors, perceived ease of use, perceived usefulness, entertainment gratification (EG), web irritation (WI), emotional state, and web atmospherics (WA)	theory of reasoned action (TRA), technology acceptance model (TAM), and uses and gratifications theory (U and G)
Pham & Ahammad, 2017	Product information, Ease of use, security assurance, customization, website appearance, order fulfilment, ease of return, ease of check out, customer satisfaction,	Procedural justice theory,
Sullivan & Kim, 2018.	Perceived value, perceived risk, online trust, perceived usefulness, repurchase intention	Not specified
Close & Kukar-Kinney, 2010	utilitarian and hedonic motivations, frequency of consumers' online cart use	Not specified
J. H. Kim et al., 2009	Convenience, information, web appearance, communication, entertainment value, customization, e-satisfaction, e-loyalty	SERVQUAL
Teo & Liu, 2007	trust, perceived risk	Not specified
Vlachos & Vrechopoulos, 2008.	seven service quality determinants, service evaluation constructs and behavioral intentions	TRA
Fiore et al., 2005.	Experiential value, attitude towards online retailer, willingness to purchase, willingness to patronize	Not specified
J. Kim & Lennon, 2013	Emotion and perceived risk	Not specified
A et al., 2005	perceived value	Not specified
Adapa et al., 2020.	perceived complexity, perceived advantage, perceived novelty and perceived risk of using smart retail technologies, intention to use, loyalty	Sensory marketing and Dual Coding Theory, expectation–confirmation theory (ECT)

Omoregie et al., 2019	satisfaction, service quality, trust, value, loyalty	Not specified
Martin et al., 2015	Challenge, Telepresence, cognitive experiential state, ease of use, customization, connectedness, perceived control, aesthetics, perceived benefits, affective experiential state, trust, perceived risk, online shopping satisfaction, Online Re-purchase Intention	Not specified
Yoo & Park, 2016	perceived value, satisfaction	Self-congruity theory
Pagani et al., 2019	PRIVACY= Privacy Concerns, perceived risk, trust	Sensory marketing and Dual Coding Theory
Li et al., 2018	online channel media richness, information privacy concern, deception, online loyalty	Media richness theory (MRT)
Falk et al., 2007	Offline channel satisfaction, Perceived usefulness, Perceived risk, Trust in the service provider, intention to use	Status Quo Bias Theory
Rose et al., 2012.	e cognitive and affective components of OCE	Not specified
Ryu & Fortenberry, 2021	Performance Expectancy (PE), effort expectancy (EE), attitude (ATT), omnichannel shopping intention (INT)	UTAUT, TPB
Hossain et al., 2020	Channel service configuration (breadth of channel choice, transparency of channels, appropriateness of channels), content consistency (information consistency, transaction data integration), process consistency (system and image consistency), assurance quality (privacy, security, service recovery accessibility), cross buying intention	Dynamic capabilities theory
Hahn & Kim, 2009	Trust, perceived internet confidence, online search and offline behaviour intention	Not specified

Q. Chen et al., 2005	multi-channel interactivity, product evaluation, trust, online purchase, offline purchase	Not specified
Gan & Wang, 2017	utilitarian value, hedonic value and social value, and perceived risk, purchase intention	Not specified
M. Frasquet et al., 2017.	Brand trust, brand attachment, offline loyalty	Cognitive dissonance theory
Azad, 2023	consumer's service experience consciousness, continuance intention, eWOM	Not specified
Qin et al., 2023	live streaming (Sense of community, interactivity, emotional support) and online consumer reviews (OCRs) (Perceived usefulness, and perceived trust), purchase intention	Channel complementarity theory
Stocchi et al., 2019	perceived usefulness, privacy concern, ease of use, intention to use the App, willingness to pay for the App, word of mouth	TAM
Mengyao Zhang et al., 2023	performance expectancy, effort expectancy, social influence, facilitating conditions, perceived risk, purchase intention and behaviour	UTAUT and perceived risk theory
Chai & Wang, 2022	Perceived usefulness, sustained usage intention	TAM
Rippé et al., 2016	Perceived control	TPB
Shankar, 2021	convenience, perceived hedonic values, perceived utilitarian values, consumers' perceived security concerns	Not specified
E. Kim, 2021	benefits (perceived usefulness and perceived enjoyment) and costs (perceived complexity and perceived privacy risk), intention to search for information and use LBS	Behavioral decision theory, cognitive evaluation theory, diffusion-of-Innovations theory, flow theory
Indiani & Febriandari, 2021	Perceived benefits, risk, online purchase intention, actual purchase	TPB, perceived risk theory, TAM

Mosquera et al., 2018	Effort expectancy, use intention, and behaviour	UTAUT2
L. W. Wu et al., 2021	multichannel integration and perceived affordances, online satisfaction, offline & online loyalty	Not specified
L. W. Wu & Tang, 2022	trust in retailers, trust in mobile payment, loyalty to retailers and loyalty to mobile payment as well as the antecedents of trust in retailers and trust in mobile payment.	Trust transfer theory, SOR model
Yang et al., 2023	Personal innovativeness, service quality, perceived risk, and trust	UTAUT original framework and UTAUT 2
J. F. Wu & Chang, 2016	Online convenience, online purchase intention	Theory of cognitive dissonance, Group entitativity theory
Hamouda, 2019	PV, satisfaction, loyalty	Not specified
Mishra et al., 2022	consumer empowerment and satisfaction	Consumer empowerment theory
K. Kim et al., 2020	1. Performance expectancy, 2. E ort expectancy, 3. Social influence, 4. Compatibility with BOPIS shopping, 5. Hedonic motivation, 6. Price value. 7. Trust,	UTAUT2
Geng & Chang, 2022	Convenience	UTAUT2, TPB
Qing, 2022	Customer satisfaction, perceived risk, perceived value of added services, perceived convenience, perceived quality, perceived personalization	TRA, TPB
Chaudhary et al., 2022	Perceived usefulness, perceived ease of use, continuance intention, actual use	Not specified
Song & Jo, 2023	Perceived ease of use, perceived usefulness, relative advantage, perceived risk, continuation intention	TAM, behavior theory, TPB
Elareshi et al., 2023	perceived the ease of use and perceived usefulness	TAM
Chi et al., 2023	consumer internal states (perceived performance risk, perceived financial risk, perceived social risk, perceived	SOR

	utilitarian value, and perceived hedonic value)	
Mukherjee & Chatterjee, 2021	Satisfaction with information online vs offline, variety seeking behavior, perceived risk online over offline, convenience online vs offline, satisfaction with information online vs offline	Consumer purchase decision-making theories
Herrero-Crespo et al., 2022	Webrooming or showrooming	TAM
Kang, 2019	Perceived value of showrooming and webrooming	Not specified
Jo, 2023	channel accessibility, perceived multichannel quality, relative advantage and customization, recommendation intention, loyalty	TAM

We also identified various research analytical methodology adopted by over 94 articles that has taken quantitative route to attain their research objectives. Some of these methodologies are Structural equation model (SEM) (Emrich et al., 2015; S. Ha & Stoel, 2009; Mpinganjira, 2014; Rehman et al., 2022; Shekhar Singh & Srivastava, 2019); PLS-SEM (Aw, 2019; Choudhury & Karahanna, 2008; M. Cotarelo et al., 2021; W. J. Lee, 2020); Three-stage least square (3SLS) estimation (Kuruzovich et al., 2008); Hierarchical multiple linear regression was performed using SPSS 18.0 (E. Kim et al., 2017); Binary logistic regression analysis using SPSS (Kleinlercher et al., 2020); Regression analysis using SPSS 25.0 (Mengyao Zhang et al., 2023); multiple regression tests (T. Chi et al., 2023). List of all some of the studies along with the analytical techniques deployed is enlisted in the table 2.15. It is further observed that none of sparingly studies have adopted to the multi-level modeling through MPlus in the context of the multichannel. We fill this gap by conducting multi-level modeling as is the also need of the data structure, wherein consumer data is nested within the manufacturer-sponsor brand data.

Table 2.15: Frequency of analytical methodology adopted by the extant literature on multichannel

Analysis Method deployed	Frequency
Structural equation model (SEM)	34
Partial least squares structural equation modelling (PLS-SEM)	31
LISREL (CB-SEM)	3
SEM - CB using SPSS & AMOS 22.0.0.0	3
Binary logistic regression analysis using SPSS.	1
CFA (AMOS) & Moderation analysis (SPSS)	1
Sequential mediation modelling using Mplus 8	1
Hierarchical multiple linear regression was performed using SPSS 18.0	1
Three-stage least square (3SLS) estimation	1
CFA / EFA	1
Regression analysis using SPSS 25.0	1
Multi-analytic approach, such as SEM and artificial neural networks (SEM-ANN).	1
multi-group analysis method in AMOS 16	1
Multiple regression tests	1
SPSS PROCESS macro	1
PLS-SEM and deep learning (artificial neural network).	1
Two-stage SEM with AMOS 22.0	1
polynomial regression analysis	1
Regression analysis	1

Table 2.16: List of studies on multichannel along with the analytical techniques adopted

Author Name & Year	Factors (of interest) investigated	Core Theory Applied	OMC Capabilities	Sample	Analysis Method deployed	CPV Factors	CPV Factor Code-1	CDO	CDO Code-2
Kuruzovich et al., 2008	Price information retrieval, search effort, referred purchase	Need fulfillment theory	Online information retrieval	6971 consumers	Three-stage least square (3SLS) estimation	Awareness, convenience	**A, C**	Purchase	**P**
Ha & Stoel, 2009	customer service, privacy, security, atmospheric, experiential, usefulness, trust, enjoyment, e-shopping intention	The technology acceptance model (TAM), the theory of reasoned action (TRA), the theory of planned behavior (TBB)	E-shopping quality; Website design, consumer service, privacy/security, atmosphere/experiential	298 college students	Structural equation model (SEM)	Convenience, trust, CPV	**CPV, C, T**	Intention	**I**
Montoya-Weiss et al., 2003	Security Risk, Service Quality, online channel use	Technology adoption and diffusion theory and adaptation level theory	Navigation Structure Perceptions, Information Content Perceptions, Graphic Style Perceptions, Information Content Perceptions, Graphic Style Perceptions, Navigation Structure Perceptions	1137 customers and 493 students	maximum-likelihood simultaneous using LISREL-VII	Perceived Risk	**R**	Use	**U**

Trenz et al., 2020	convenience, risk, product uncertainty, online shopping experience, risk propensity	Not specified	Omnichannel integration of acquisition and recovery	778 consumers	Partial least squares structural equation modeling (PLS-SEM)	Convenience and perceived risk		Choice Probability (CPR)	**Cho**
Emrich et al., 2015	variety, convenience, risk, channel preference, channel patronage inention	Negativity bias theory	Channel (full integration, asymmetrical integration, no integration), and assortment (subsititutive, complementary, and independent relations) structure	959 respondents and2005 respondents	SEM	Perceived Control, convenience, risk	**Cont, C, R**	preference, patronage intention	**P, I**
Choudhury & Karahanna, 2008	convenience, trust, efficacy of information acquisition, relative advantage of an electronic channels, behaviour intent: web	Innovation diffusion theory	Reletive adtange of electronic channels in four purchase stages of requirements determination, vendor selection, purchase, and after-sales service	338 faculty and staff at a large university	PLS-SEM	CPV, trut, awareness, convenience	**CPV, T, A, C**	Behaviour intention	**I**
Mpinganjira, 2014	Personalisation, ease of communication, privacy protection, repeat purchase intention	Not specified	Nil	201 online customers	Structural Equation Modelling was used to analyse the data using SPSS/Am	Ubiquitous Personalization, convenience, trust	**UP, C, T**	Repeat Purchase Intention	**I**

					os version 21				
Kleinlercher et al., 2020	Involvement, convenience, time savings, online/physical store shopping experience, assortment attractiveness, webrooming, purchase	Anticipated utility theory	Price and assortment	1497 customers	Binary logistic regression analysis using SPSS.	Perceived Control, convenience, seamless experience,	**Cont, C, SE**	Purchase	**Pur**
E. Kim et al., 2017	Perceived Risk, Convenience (location), Product involvement	Diffusion-of-Innovations (DOI) theory	Buy-Online, Pickup In-Store (BOPS)	371 consumers	Hierarchical multiple linear regression was performed using SPSS 18.0	Ubiquitous Personalization, perceived control, perceived risk	**UP, C, R**	Intention to adopt and use BOPS	**I**
Singh & Srivastava, 2019	perceived usefulness, perceived risk, perceived self-efficacy, purchase intention, actual purchase behaviour	TPB, TAM	Nil	344 customers	SEM	CPV, risk, trust, perceived control	**CPV, R,T, C**	Purchase intention, actual purchase behaviour	**I, Pur**
Cotarelo et al., 2021	seamless and consistent omni-channel experience (intensity), satisfaction, loyalty	Not specified	OC intensity	285 students and buyers who used click and	SmartPLS-SEM	CPV, SE	**CPV, SE**	Loyalty	**L**

				collect system					
Aw, 2019	**Shopping motivation** - Efficiency shopping, bargain hunting, variety seeking. **Webrooming**	Information processing and uncertainty reduction theories	Webrooming	300 young shoppers	Partial Least Square Structural Equation Modelling (PLS-SEM)	Perceived Control, convenience	**Cont, C**	Webrooming Intention	**I**
Lee, 2020	Perceived convenience, customer satisfaction,intention to re-visit OMC	Not specified	Integrated Promotion (IP), Integrated Transaction Information (ITI) [29], Integrated Product & Pricing Information (IPP), Integrated Information Access (IIA), Integrated Order fulfilment (IOF), Integrated customer service (ICS)	479 students having atleast one-time online shopping experience	PLS-SEM	Convenience, SE	**C, SE**	Intention to re-visit OMC	**I**
Rehman et al., 2022	Brand experience, functional benefits, attribute perception, price perception, appearance perception, appearance perception, brand repurchase intention, brand preference	Self-congruity theory	Nil	325 respondents	SEM was conducted using AMOS software	SE, CPV, awareness	**SE, CPV, A**	Brand Repurchase Intention, brand preference	**I, Pref**

Marta Frasquet & Miquel, 2017	Overall satisfaction, online/offline loyalty	Not specified	34 items measurement scale developed	380 and 381 multi-channel shopper in Spain and UK, respectively	EQS 6.1	Seamless Experience	**SE**	Loyalty	**L**
Juaneda-Ayensa et al., 2016	Personal innovativeness, effort expectancy, personal security, purchase intention	Unified Theory of Acceptance and Use of Technology (UTAUT2) model		628 customers of the store Zara	PLS-SEM	Perceived Control, perceived risk, convenience	**Cont, R, C**	Purchase intention	**I**
Fernandes & Barfknecht, 2020	Informative content, Perceived ease of use, trust, entertainment, Hedonic & Utalitarian shoppers value	The extended TAM, specifically the TAM3, and perceived value theory	Informative content, entertainment	245 consumers who had previously shopped via a mobile shopping application	PLS-SEM	SE, awareness, convenience, trust	**SE, A, C, T**	Repurchase intention	**I**
Kokku, 2021	shopping value, utilitarian and hedonic benefits, channel patronage	Not specified	Not discussed	308 software Yuppy employees	IBM SPSS 25.0 and PLS-SEM	Customer Perceived Value	**CPV**	Channel Patronage	**L**

Tyrväinen et al., 2020	cognitive and emotional customer experience, personalization, word of mouth, repeat purchase intention	Not specified	Not discussed	2084 finnish and 2334 swedish consumers	PLS-SEM	Ubiquitous Personalization	**UP**	repeat purchase intention	**I**
J. J. Wu et al., 2018	Trust, intention to recommendation	Schema theory	Service quality: Complementary of interaction, environment, and outcome quality	474 respondents	SEM	Trust	**T**	Recommendation intention	**I**
Li et al., 2018	Retailer uncertainty, identity attractiveness, showrooming, loyalty	Push-Pull-Mooring (PPM) framework	10 items scale used on CCI	259 respondents having experience of an omnichannel retailer	SPSS 19.0, LISREL	Perceived Risk	**R**	retention	**L**
Le & Nguyen-Le, 2020	Customer empowerment, customer experience, trust, variety-seeking, patronage intention	Stimulus-organism-response (SOR) framework	Channel-service configuration (Breadth of channel-service choice (BCSC), Transparency of channel-service configuration (TCSC), Integrated interaction (Content and process consistency)	312 omnichannel customers	PLS-SEM	Perceived Control, SE, trust	**Cont, SE, T**	Patronage Intention	**I**

Mishra et al., 2022	Customer empowerment, satisfaction, unreliability (risk & trust), consumer retention	SOR	Alignment of fundamentals, and Centralization of Back-end system	427 consumers	SPSS AMOS 25 and PROCESS Macros	Trust, perceived control	**T, Cont**	Retention	**L**
Jayasingh et al., 2022	Performance expectancy, Effort expectancy, Facilitating conditions, Hedonic motivation, perceived value, Omni-channel shopping intention	UTAUT2	Not discussed	406 respondents	Structural equation modeling (SEM) was conducted using IBM SPSS 28.0 and IBM Amos 28.0 for	Convenience, CPV	**C, CPV**	Omni-channel shopping intention	**I**
Silva et al., 2018	usefulness, ease of use, and compatibility, risk, customer experience, future use intention	TAM, TRA, Theory of diffusion of innovations, TBA, and Attitude-behavior theory	Not discussed	190 respondents	SPSS & AMOS	Perceived Risk, UP, CPV, convenience	**R, UP, CPV, C**	Use intention	**I**
Gao & Fan, 2021.	Offline & Online experience, and satisfaction	Not specified	Not discussed	265 survey respondents	polynomial regression analysis	Seamless Experience	**SE**	Repurchase intention	**I**
Goraya et al., 2022.	perceived empowerment, perceived assortment structure, perceived benefits	Self-determination theory	consistent brand promotions and advertisements, consistent product and price, inventory information,	304 (search product) and 307 (experience product	SmartPLS 3.2 SEM	Perceived Control, convenience, CPV	**Cont, C, CPV**	Patronage intention	**I**

			promotion integration, collect, return, repair, or exchange integration	) respons es for study 1 and study 2, respecti vely					
Xiaoxia Chen et al., 2022	Experience, loyalty	SOR	Products collaboration (PROC), Price collaboration (PRC), Sale promotional collaboration (SPC), Service and distribution collaboration (SDC)	550 agri-fresh produce omni-channel custom ers.	AMOS	Seamless Experienc e	**SE**	Loyalty	**L**
Rodríguez-Torrico et al., 2019	affective (M-satisfaction) and cognitive (M-trust and M-convenience), M-repurchase intention	SOR	Navigation m-experience: Visual Appeal, Interactivity, Enjoyment, Personalization. Safety m-experience: Reputation, Guarantees, Security and Privacy Mobile ubiquity Table	122 custom ers	PLS SEM	SE, trust, convenien ce	**SE, T, C**	Repurc hase intentio n	**I**

Sun et al., 2020	satisfaction, omnichannel self-efficacy, Mobile identity, Omnichannel service usage	Social cognitive theory (SCT)	Mobile identity, Integration quality, Transparency of Channel Service, Breadth of Channel Choices, Content & Process Consistency	401 qualified samples	PLS SEM	Seamless Experience	**SE**	omnichannel service usage	**Use**
Xinyu Chen et al., 2022	personalization, trust, reactance, privacy concerns, website loyalty	Exchange theory, Reactance theory	Website	270 qualified respondents	AMOS version 20 for confirmatory factor analysis (CFA), moderation analysis was conducted using SPSS version 22	Ubiquitous Personalization	**UP**	Loyalty	**L**
Abbasi et al., 2023	utilitarian and hedonic performance confirmation and trust (System, Service and information qualities), attractiveness of alternatives, continuation intention	SOR and information system success model	Retail app	435 respondents	The study analyzed the data using a hybrid approach incorporating **partial least squares structural equation**	Awareness, trust	**A, T**	Continuation intention	**I**

					modeling and **deep learning (artificial neural network)**.				
Chatterjee et al., 2021	choice, content consistency, and customization, perceived benefits, data privacy, security, risk, OMC use intention	Roger's innovation diffusion theory (IDT) and privacy calculus theory	Not discussed	387 respondents	PLS-SEM technique	SE, UP, CPV, perceived risk	**SE, UP, CPV, R**	OMC use intention	**I**
Gasparin et al., 2022	maximize the utility of a purchase, reduce choice uncertainty or regret, and/or satisfy curiosity about a purchase and pre-purchase information search behavior, repurchase intention, word of mouth	Customer journey model	Post-decision information search (PDIS)	359 and 238 participants in the first and second wave, respectively	PLS-SEM using the SmartPLS 3.0 software	Perceived Control, awareness, perceived risk	**Cont, A, R**	Repurchase intentions	**I**
Haridasan et al., 2021	Product fit uncertainty, purchase involvement, external information search, alternatives attractiveness, multichannel self-efficacy, switching costs, cross-channel switching intention	Uncertainty reduction theory	Not discussed	456 respondents	The proposed relationships were tested using two-stage structural model with AMOS 22.0	Convenience, perceived control, awareness, CPV	**C, Cont, A, CPV**	Loyalty	**L**

Swoboda & Fränzel, 2022	Omnichannel retailer quality, Online shopping experience, pre-purchase, purchase	Accessibility-diagnosticity theory	Pre-purchase integration includes, e.g., the provision of information, services, or promotion, regarding stage-specific behaviors like need recognition, information search or evaluation, while **purchase integration** includes, e.g., transaction or product information, order fulfillment, or services, regarding stage-specific behaviors like identifying alternatives, choice and ordering, re-purchase - information (depending upon its **accessibility and relative diagnosticity**)	394 shoppers	Sequential mediation modeling with longitudinal data is applied using Mplus 8, as is LMS for latent interaction effects, i.e., steady moderated mediation with conditional effects	Seamless Experience	**SE**	Purchase	**P**

Min Zhang et al., 2020.	psychological distance and perceived uncertainty, purchase intention	Construal level theory	Live video streaming	79 participants	Model 4 of the PROCESS macro	Perceived Risk	**R**	Purchase intention	**I**
Kasilingam & Krishna, 2022	Convenience, intention to uee and willingness to pay premium	TRA, theories on value dimensions, Sheth–Newman–Gross model or the Theory of Consumption Values (TCV), IDT, TPB, Value-based Adoption Model and Unified Theory of Acceptance and Use of Technology	Not discussed	1623 respondents	SPSS 24.0 and SmartPLS 3.0 PLS-SEM, MGA algorithm of SmartPLS 3.0.	Convenience	**C**	Intention to use, purchase	**I, Use, Pur**
Wong & Haque, 2022.	Brand love, trust, purchase intention, word of mouth	The Brand Resonance Model, triangular theory of love	Website (visual appeal, and perceived enjoyment) and brand innovativeness	229 customers	PLS-SEM with SmartPLS version 3.3.3 was employed as it can examine latent variables without requiring strict normal distributions of data	Trust	**T**	Purchase intention	**I**

Min Zhang et al., 2018	Empowerment, trust, patronage intention	SOR	Integrated promotion (IP), and product & price	155 consumers	partial least squares (PLS) method implemented in Smart PLS 3.0	Perceived Control, trust	**Cont, T**	patronage intention	**I**
Cattapan & Pongsakornrungsilp, 2022.	perceived risk, customer satisfaction, purchase intention	SOR	integrated product and price, integrated promotion, integrated transaction information, integrated information access, integrated order fulfilment, and integrated customer service	400 respondents	three-stage data analysis was performed using SPSS 17.0 and AMOS 21.0; descriptive statistics, CFA, and SEM	Perceived Risk	**R**	Purchase intention	**I**
Junbin & Xinyu, 2022	**channel control experience**: perceived channel attribute familiarity, channel type matching, and cross-channel access convenience;	EDT, Consistency theory, self-efficacy theory, self-regulating attitude theory	Not discussed	210 and 342 respondents in stage 1 and 2, respectively	PLS SEM	Ubiquitous Personalization, convenience, SE	**UP, C, SE**	Omni-channel customer retention intention	**I**

	consistent interactive experience: information crosschannel consistency and cross-channel service support								
Levin et al., 2005	Product attribute,consumer attribute, shopping stage, shopping preference	Not specified	Not discussed	199 students, and 214 nationwide respondents	Regression analysis	Customer Perceived Value	**CPV**	Shopping preference	**Pref**
Lim, 2015	perceived value, social factors, perceived ease of use, perceived usefulness, entertainment gratification (EG), web irritation (WI), emotional state, and web atmospherics (WA)	theory of reasoned action (TRA), technology acceptance model (TAM), and uses and gratifications theory (UandG)	Entertainment gratification, web irritation	320 e-shoppers	SEM	CPV, SE, trust, convenience	**CPV, SE, T, C**	e-shopping intention	**I**
Pham & Ahammad, 2017	Product information, Ease of use, security assurance, customization, website appearance, order fulfilment, ease of return, ease of check out, customer satisfaction,	Procedural justice theory,	Responsiveness to customer satisfaction, Order fulfilment,	600 students	multi-group analysis method in AMOS 16	Awareness, convenience, UP	**A, C, UP**	Repurchase intention, purchase	**I, Pur**
Sullivan & Kim, 2018.	Perceived value, perceived risk, online trust, perceived usefulness, repurchase intention	Not specified	Website Reputation	312 participants	PLS-SEM	CPV, perceived risk, trust	**CPV, R, T**	Repurchase intention	**I**

Close & Kukar-Kinney, 2010	utilitarian and hedonic motivations, frequency of consumers' online cart use	Not specified	Not discussed	247 online shoppers	SEM	Awareness	**A**	Purchase intent, use, purchase	**I, Use, Pur**
J. H. Kim et al., 2009	Convenience, information, web appearance, communication, entertainment value, customization, e-satisfaction, e-loyalty	SERVQUAL	Web appearance, communication	366 students	SEM	Convenience, awareness, UP	**C, A, UP**	e-Loyalty	**L**
Teo & Liu, 2007	trust, perceived risk	Not specified	Characteristics of e-commerce vendors (perceived reputation, perceived size, MCI, system assurance), Characteristic of consumer (propensity to trust)	544 (US), 1381 (Singapore), and 988 (China) respondents	SEM was conducted using AMOS 4.	Trust, perceived risk	**T, R**	Purchase	**Pur**
Vlachos & Vrechopoulos, 2008.	seven service quality determinants, service evaluation constructs and behavioral intentions	TRA	Seven service quality determinants are .Interaction Quality, Content Quality, Device Quality, Privacy, Connection Quality, Contextual Quality, and Customer Service	144 respondents	PLS-SEM	CPV	**CPV**	Buying intention	**I**

Fiore et al., 2005.	Experiential value, attitude towards online retailer, willingness to purchase, willingness to patronize	Not specified	Image interactivity technology (IIT)	206 subjects	SEM	Seamless Experience	**SE**	Willingness to purchase, willingness to patronize	**Pur, L**
J. Kim & Lennon, 2013	Emotion and perceived risk	Not specified	Website quality (Website design, fulfillment / reliability, customer service, security/privacy) and reputation	219 students	Structural equation modeling (SEM)	Perceived Risk	**R**	purchase intention	**I**
A et al., 2005	perceived value	Not specified	Efficiency, System Availability, Fulfillment, and Privacy	549 respondents	CFA/EFA	CPV	**CPV**	Intention, Loyalty	**I, L**
Adapa et al., 2020.	perceived complexity, perceived advantage, perceived novelty and perceived risk of using smart retail technologies, intention to use, loyalty	Sensory marketing and Dual Coding Theory, expectation–confirmation theory (ECT)	Smart Retail Technologies as one of the OMC capabilities	338 respondents	SEM	Perceived Risk, CPV	**R, CPV**	Loyalty, Intentiont to use	**L, I**
Omoregie et al., 2019	satisfaction, service quality, trust, value, loyalty	Not specified	Not discussed	565 customers	PLS–SEM using SmartPLS version 3.	Trust, CPV	**T, CPV**	Loyalty	**L**

Martin et al., 2015	Challenge, Telepresence, cognitive experiential state, ease of use, customization, connectedness, perceived control, aesthetics, perceived benefits, affective experiential state, trust, perceived risk, online shopping satisfaction, Online Re-purchase Intention	Not specified	Challenge, Telepresence, ease of use, customization, connectedness, aesthetics	392 and 180 responses from frequent and infrequent shoppers group, respectively	SmartPLS SEM	Convenience, UP, perceived control, CPV, SE, trust, risk	**C, UP, Cont, CPV, SE, T, R**	Online Re-purchase Intention	**I**
Yoo & Park, 2016	perceived value, satisfaction	Self-congruity theory	e-mass customization	online survey in Korea for luxury products	Single group structural equation modeling was used	Perceived Control	**Cont**	Loyalty	**L**
Pagani et al., 2019	PRIVACY= Privacy Concerns, perceived risk, trust	Sensory marketing and Dual Coding Theory	Nature of the platform interaction; touch versus combined touch and voice	95 students	PLS-SEM	Perceived Risk	**R**	Trust	**T**
Li et al., 2018	online channel media richness, information privacy concern, deception, online loyalty	Media richness theory (MRT)	Not discussed	258 respondents	SPSS 19.0	Perceived Risk	**R**	Loyalty	**L**
Falk et al., 2007	Offline channel satisfaction, Perceived usefulness, Perceived risk, Trust in the service provider, intention to use	Status Quo Bias Theory	Not discussed	639 customers	SEM - AMOS 5.0	CPV, perceived risk, trust	**CPV, R, T**	Intention to use	**I**

Rose et al., 2012.	e cognitive and affective components of OCE	Not specified	Shopping website: interactivity speed, telepresence, challenges, connectedness, aesthetic	220 online shoppers	PLS-SEM	SE, perceived control, CPV, trust	**SE, Cont, CPV, T**	Online Repurchase Intenon	**I**
Ryu & Fortenberry, 2021	Performance Expectancy (PE), effort expectancy (EE), attitude (ATT), omnichannel shopping intention (INT)	UTAUT, TPB	Not discussed	470 consumers	SEM	Convenience	**C**	Intention	**I**
Hossain et al., 2020	Channel service configuration (breadth of channel choice, transparency of channels, appropriatness of channels),, content consistency (information consistency, transaction data integration), process consistency (system and image consistency), assurance quality (privacy, security, service recovery accessibility), cross buying intention	Dynamic capabilities theory	Channel service configuration (breadth of channel choice, transparency of channels, appropriatness of channels), content consistency (information consistency, transaction data integration), process consistency (system and image consistency), assurance quality (privacy, security, service recovery accessibility)	301 customers	PLS-SEM	CPV	**CPV**	Cross buying intention	**I**

Hahn & Kim, 2009	Trust, perceived internet confidence, online search and offline behaviour intention	Not specified	Not discussed	261 students	SEM	Trust	**T**	Online search and offline behaviour intention	**I**
Q. Chen et al., 2005	multi-channel interactivity, product evaluation, trust, online purchase, offline purchase	Not specified	Interactivity	100 students	General	Trust	**T**	Online and in-store purchase intention	**I**
Gan & Wang, 2017	utilitarian value, hedonic value and social value, and perceived risk, purchase intention	Not specified	Not discussed	277 respondents	PLS-SEM	Perceived Risk	**R**	Purchase intention	**I**
M. Frasquet et al., 2017.	Brand trust, brand attachment, offline loyalty	Cognitive dissonance theory	Interaction between offline and online channels	Online survey answered by 761 multichannel apparel shoppers in two countries (UK and Spain)	SEM	Customer Perceived Value	**CPV**	Loyalty	**L**
Azad, 2023	consumer's service experience consciousness, continuance intention, eWOM	Not specified		219 participants who	SEM - AMOS	Seamless Experience	**SE**	Continuance Intention	**I**

				shop from multi-channel grocery shops					
Qin et al., 2023	live streaming (Sense of community, interactivity, emotional support) and online consumer reviews (OCRs) (Perceived usefulness, and perceived trust), purchase intention	Channel complementarity theory	Live streaming and customer reviews	448 customers	SEM	Customer Perceived Value	**CPV**	Purchase intention	**I**
Stocchi et al., 2019	perceived usefulness, privacy concern, ease of use, intention to use the App, willingness to pay for the App, word of mouth	TAM	Branded app (Privacy, security, design characteristics, Ubiquity app compatibility)	335 consumers	SEM	CPV, perceived risk	**CPV, R**	Intention to use the App, willingness to pay for the App	**I, L**
Mengyao Zhang et al., 2023	performance expectancy, effort expectancy, social influence, facilitating conditions, perceived risk, purchase intention and behaviour	UTAUT and perceived risk theory	Online Community Group Buying Platform	280 online consumers who had experience in online community group buying	Regression analysis using SPSS 25.0	Convenience	**C**	Purchase intention and behaviour	**I, Pur**

Chai & Wang, 2022	Perceived usefulness, sustained usage intention	TAM	channel service transparency, channel choice breadth, content consistency, and process consistency	284 consumers having BOPS experience	PLS-SEM	Customer Perceived Value	**CPV**	Sustainable Usage Intention	**I**
Rippé et al., 2016	Perceived control	TPB	Adaptive selling (AS)	387 students	Covariance-based SEM - IBM SPSS AMOS 22.0.0.0	Perceived Control	**Cont**	Purchase intention	**I**
Shankar, 2021	convenience, perceived hedonic values, perceived utilitarian values, consumers' perceived security concerns	Not specified	Webrooming	534 banking users	Covariance-based SEM and PROCESS macro	Convenience	**C**	Webrooming Intention	**I**
E. Kim, 2021	benefits (perceived usefulness and perceived enjoyment) and costs (perceived complexity and perceived privacy risk), intention to search for information and use LBS	Behavioral decision theory, cognitive evaluation theory, diffusion-of-Innovations theory, flow theory	Location-based retail (LBS) apps	385 respondents	PLS-SEM	CPV, perceived risk	**CPV, R**	Intention to search for information and use LBS	**I, Use**
Indiani & Febriandari, 2021	Perceived benefits, risk, online purchase intention, actual purchase	TPB, perceived risk theory, TAM		450 consumers	PLS-SEM	CPV, perceived risk	**CPV, R**	Online purchase intention, actual purchase	**I, Pur**

Mosquera et al., 2018	Effort expectancy, use intention, and behaviour	UTAUT2	Smartphone usage	1043 customers	SEM	Convenience	**C**	use intention, and behaviour	**Use, I, Pur**
L. W. Wu et al., 2021	multichannel integration and perceived affordances, online satisfaction, offline & online loyalty	Not specified	Multichannel integration, Perceived affordances	387 customers of certain multichannel retailers.	SEM	Seamless Experience	**SE**	Online / offline loyalty	**L**
L. W. Wu & Tang, 2022	trust in retailers, trust in mobile payment, loyalty to retailers and loyalty to mobile payment as well as the antecedents of trust in retailers and trust in mobile payment.	Trust transfer theory, SOR model	Mobile payment, mobile apps,	358 mobile payment user during shopping process	SEM that involves LISREL and SPSS process	Trust	**T**	Loyalty to retailer and mobile payment	**L**
Yang et al., 2023	Personal innovativeness, service quality, perceived risk, and trust	UTAUT original framework and UTAUT 2		420 shoppers	Multi-analytic approach, such as SEM and artificial neural networks (SEM-ANN).	Trust, perceived risk, CPV	**T, R, CPV**	Shopping intention & behaviour	**I, Pur**
J. F. Wu & Chang, 2016	Online convenience, online purchase intention	Theory of cognitive dissonance, Group entitativity theory	Transparency of service configuration, Information consistency, Business	390 multichannel shoppers	SEM	Convenience	**C**	Online purchase intention	**I**

			ties, Process consistency						
Hamouda, 2019	PV, satisfaction, loyalty	Not specified	Quality of MC integration	395 bank customers.	SEM	Customer Perceived Value	**CPV**	Loyalty	**L**
Mishra et al., 2022	consumer empowerment and satisfaction	Consumer empowerment theory	Information & promotion integration, BOPS, post-purchase service integration, inventory status	336 young consumers having experienced omnichannel retailing	SPSS PROCESS macro	Seamless Experience	**SE**	Consumer patronage intention	**I**
K. Kim et al., 2020	1. Performance expectancy, 2. E ort expectancy, 3. Social influence, 4. Compatibility with BOPIS shopping, 5. Hedonic motivation, 6. Price value. 7. Trust,	UTAUT2	Buy-Online-Pick-Up-In-Store Service	358 consumers who had experience using BOPIS at least once	SEM	Convenience	**C**	Behavioural intention and use	**I, Use**
Geng & Chang, 2022	Convenience	UTAUT2, TPB	Quality, monetory savings	382 omnichannel consumers.	PLS-SEM	Convenience	**C**	Continuance intention	**I**
Qing, 2022	Customer satisfaction, perceived risk, perceived value of added services, perceived	TRA, TPB		250 respondents	SPSS	Convenience	**C**	Customer Purchase	**Pur**

	convenience, perceived quality, perceived personalization							Decision	
Chaudhary et al., 2022	Perceived usefulness, perceived ease of use, continuance intention, actual use	Not specified		302 respondents	SEM	Customer Perceived Value	**CPV**	Continuance intention, actual use	**I, Use**
Song & Jo, 2023	Perceived ease of use, perceived usefulness, relative advantge, percveived risk, continuation intention	TAM, behavior theory, TPB	Accesibility, monetary savings, transactional efficiency	262 respondents	PLS-SEM	Convenience, CPV, perceived risk	**C, CPV, R**	Continuance intention	**I**
Elareshi et al., 2023	perceived the ease of use and perceived usefulness	TAM	social media marketing (SMM) [social media features, electronic word of mouth, informativeness]	329 respondents through online banking services	SEM	Convenience, CPV	**C, CPV**	Behavioral intention, customer loyalty	**I, L**
Chi et al., 2023	consumer internal states (perceived performance risk, perceived financial risk, perceived social risk, perceived utilitarian value, and perceived hedonic value)	SOR	Product variety, information quality, style conformity, and service quality	379 respondents	Multiple regression tests	Perceived Risk	**R**	Purchase intention	**I**
Mukherjee & Chatterjee, 2021	Satisfaction with information online vs offline, variety seeking behavior, perceived	Consumer purchase decision-making theories	webrooming and showrooming	243 respondents	SEM	SE, perceived control, perceived risk,	**SE, Cont, R, C**	Intention to search and buy online	**I**

	risk online over offline, convenience online vs offline,satisfaction with information online vs offline					convenience		vs offline	
Herrero-Crespo et al., 2022	Webrooming or showrooming	TAM	webrooming and showrooming	462 respondents	SEM	Customer Perceived Value, convenience	**CPV, C, T**	Behavioural intention (webrooming & showrooming)	**I**
Kang, 2019	Perceived value of showrooming and webrooming	Not specified	individual characteristics of Personality, Information, Brand prestige, and Practicality-based fashion lifestyle	601 SoLoMo consumers	SEM	Perceived Control	**Cont**	Omnichannel shopping & Product review sharing intention	**I**
Jo, 2023	channel accessibility, perceived multichannel quality, relative advantage and customization, recommendation intention, loyalty	TAM	Online for Offline (O4O) context	205 respondents	PLS-SEM	Convenience, UP, CPV, convenience	**C, UP, CPV, C**	Recommendation intention, loyalty	**I, L**

2.12. Conclusion

The prime objective of this chapter is to conduct comprehensive review of the literature in the domain of cross channel integration and to identify the direction the studies have taken in the field. The discussion on the subject started with clarification on various terminologies surrounding the domain, followed by the transition from monchannel to multiple channel, then from separated to integrated channel in the retail chain structure. During the discussion, certain case from the practice was brought out to understand the direction in which organization and hence the customers are moving towards in the context of the omnichannel.

By conducting in-depth review of the literature, we brought out various definitions of the four replaceable terminologies of multichannel, cross channel integration, multichannel integration, and omnichannel. This was followed by the focus area surrounding various definitions on the construct as the definition becomes the foundation of the capability development that the retailers undergoes during their transition either from monochannel to multichannel, or from multichannel to cross channel integration. This leads us towards the resource-based view of the cross channel integration strategy, as organizations will have to be resourceful in order to transform itself to become a omnichannel or even from start their journey from being a soiled multichannel to travel through to the cross channel integration continuum and aspire to achieve omnichannel. During this phase we also studied the literature in-depth and provided the summary of it by specifically tabulating various capability dimensions studies by various authors, along with factor by anchoring on various respective theories. This section concludes by informing that the studies have ignored to consider comprehensive capabilities while conducting studies, have heavily relied on one or two specific capabilities, unlike the provided by Cao and Li (2015). We anchor our thesis studies on this metric of measuring cross channel integration, as is the most comprehensive provided till date.

Further, we understand that most of the literature around cross channel integration have been revolving around retailers, and some on brands of retailer, with sparingly on retail platforms brands, and labelled brands. We could not find more than few discussing about the manufacturer brands' strategy of distribution of products and solutions, especially through the integrated channel route. With retailers growing in size and controlling most of the customer relationships, manufacturer has to cover the ground by having direct access to the consumer and reduce their reliance on the retailers. So, several manufacturer-sponsor consumer brands have started their in-house distribution, which then open up their opportunity to leverage on the integration of the channel to tap to the changing behavior of the consumers. In India, many manufacturer-sponsor consumer brands have already transformed themselves into omnichannel. Hence, it becomes an urgent topic to conduct research and provide guidance to the practicing manager in the industry. Here, we obtained our first theme of the studies done and discussed in this thesis.

Further, the literature review provides a knowledge on the treatment of the cross channel integration strategy as a service, irrespective of the product or solution that the retailers or brands are distributing through these channels. These implies that all the theories relevant for service industry, becomes relevant to this construct of cross channel integration, as well. We obtained the next themes of the thesis study, here.

We further delve deeper into the literature to find that the studies on demand-side perspective in the domain of cross channel integration or omnichannel is still miniscule. There are couple of studies that has been done lately, but still there are several gaps in the demand-side perspective that needs to be filled. So, the subsequent theme of our studies comes from this perspective.

So, if we review the studies then we can find customer perceived value, or experience that has been done on the demand-side perspective. Literature started with discussing benefits, then utilities, which then finally became perceived value, and which evolved into the experience. So, we conduct literature review on the customer perceived value and brought out various dimensions that has been studied, started the very first reference of the construct in early 1960s. During the course of time and through our two empirical studies, we deployed various dimensions of these customer perceived value in the context of cross channel integration, especially the model of Petrick's 2002 model on SERV-PERV, which is an extension of PERVAL model of Sweeney and Soutar, 2001's model. Further, in other study we deployed Goersch's 2002 model, which was among the first to come up with enlisting benefits of multichannel, conceptually though.

Ebrahim, 2013 elaborated on the brand preference literature, and provided extensive understanding on how experience influences formation brand preference, apart from cognitive factors such as attributes, etc. So, this thesis extends this understanding my studying various cognitive, emotive, and social dimension of customer perceived value, evaluating which results into a formation of brand preference, and loyalty as well.

We conduct in-depth literature review to understand the construct of brand preference and brand loyalty, right from the definition and by providing various rationale of the definitions. Further, we provides comparison of various other brands and branding related dimensions to suggest the significance of studying brand preference, over others. During the course of studies, we searched more literature and could find several that has studied consequence of customer perceived value, which coincides with brand preference, and vice versa. Similarly, we did in-

depth studies on antecedent and consequence of brand preference, which lead us to various elements of customer perceived value including the construct of awareness, convenience, trust, risk, seamless experience, control, ubiquitous, empowerment, emotional response, reputation, and convenience as the antecedent to brand preference. Consequence of brand preference lead us towards the construct of brand loyalty. This has lead us to the intension towards studying these dimensions and relationship in the context of cross channel integration services for the manufacturer-sponsor consumer brands in India (Bharat).

We also conducted literature to find out prevalence of these studies in the context of multichannel and could sparingly find some. And there were none that has studied both brand preference, and brand loyalty, simultaneously.

Thereafter, we conducted in-depth literature review on brand loyalty, starting from the very basic definitions. We provided the context of these studies that have provided the definition of brand loyalty, and could find most have been done in the monochannel, with some in multichannel context. We also cited studies that have deployed this seminal definitions that we tabulated. We briefly discussed the nature of formation of brand loyalty and provide tabulation on antecedents of brand loyalty, including their objective, hypotheses, sample/method, context, and finding. We could observe that there are many antecedents that are the elements of customer perceived value, as considered the factors of interest in this thesis.

Finally, the literature was reviewed on the relationship of brand preference with brand loyalty, with some suggests that brand loyalty is antecedent of brand preference, but most have established the reverse association, which suggests that brand preference leads to brand loyalty. We believe in this association and move ahead with developing our model in the next chapter.

But, before that we also brought out the important dimension of the discussion, and that is product category. Product category, or industry or business sector has an influencing effect on the consumer behavior as informed by the prior studies. We discussed this relationship in details and provided the action taken through various studies so that the results obtained becomes generalization across various business sectors, or industry, or product category. We have not only studied different brands, but have studies different product within the same brands, and across various different brands.

Further, there is a discussion on the methodology and theories adopted by the extant literature in the context of multichannel. This is to bring out the frequencies by which various theories and methodologies are deployed for conducting successful studies in the context. We, therefore, adopt one of these relevant model of SOR framework. We also provided the discussion of choosing this framework over other related SOBC framework.

So, in the nutshell, we identified various themes during the in-depth literature review that we conducted on four major constructs, and eleven minor constructs of factors of customer perceived value. Subsequent chapters shall discuss the studies that has anchored on these themes to find answers to various questions, elaborated in the chapter one.

Chapter Three

Meta-analysis study: Customer Perceived Value and Decision Outcomes in an Omni-Channel settings: A meta-analysis

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3.4. Hypotheses Development

3.4.1. Impact of customer perceived value on Customer Decision Outcomes

3.5. Method

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3.7. Discussion

3.7.1. What specific areas retailers or brands should prioritize in order to achieve a positive customer outcome in consumer decision-making?

3.7.2. Theoretical Contributions

3.7.3. Limitations

3.7.4. Future research directions

3.1. Introduction

The emerging body of study on Omni-channels (OMC) reveals several disparate aspects that have diverse effects on various customer behaviors. This emphasizes the need to collect and combine these discoveries in order to offer practical and useful information for professionals. These insights can help achieve the targeted consumer behavior results and successfully execute their tasks in the field. This meta-analysis study conducts a comprehensive evaluation and analysis of previous studies to determine the characteristics of customer perceived value (CPV) that have an impact on consumer choice outcomes (CDO) in the highly integrated cross-channel environment, also known as OMC. CDO, or customer Decision-making Process, encompasses the several stages of decision-making that a customer goes through while making a purchase. These stages include preference, intent, choice, purchase, usage, and loyalty. This chapter outlines detailed meta-analysis study, titled "customer perceived value and decision outcomes in an Omni-Channel settings: A meta-analysis". This study enhances understanding of perceived value in a cross-channel setting by employing a distinctive meta-analysis methodology to discover the elements that influence customer perceived value (CPV) in the context of customer data optimization (CDO). This chapter starts with section 3.2, which discusses the context of the study. Section 3.3 presents the conceptual framework, section 3.4 introduces the formulation of hypotheses, and it is followed by section 3.5, which explains the research approach employed in this thesis. Section 3.6 provides the results obtained from the meta-analysis. The discussion of the findings is presented in section 3.7, which covers the practical consequences, theoretical contributions, limits, and future research prospects of the study.

3.2. Research context and rationale

Retailers are adapting to changing customer behavior by modifying and enhancing their distribution methods. This has led to a progression from using a single offline

channel to multiple siloed offline and online channels, ultimately achieving a fully connected multiple channel approach known as Omni-channel (OMC). This has also introduced a cross-channel integration (CCI) continuum. As competition increases, converting existing customers into loyal ones becomes more challenging. However, recent industry research indicates that loyalty is diminishing and undergoing transformations, with shifts in brand choice amounting to 45% and 73%. This shift is attributed to customers easily changing their brand preferences and shopping channels. Retailers must focus on the first phases of the decision-making process to cater to customers' demands at each level (Lynch & Barnes, 2020). A 2005 study by bain.com found that placing importance on customer value is crucial, rather than prioritizing business beliefs.

What is the resolution? What factors of customer perceived value influences consumer behavior, in terms of intra-stage consumer decision outcome, when the retailers or brands operate through multichannel distribution strategy?

The answers to this issue can be found in the vast corpus of scholarly research papers that have gathered throughout time. These studies have analyzed how different aspects of CPV affect specific decision outcomes in the consumers' decision-making process. These outcomes include preference, intent, choice, attitude, purchase, usage, and loyalty, which together compose CDO. Furthermore, these studies are conducted within the framework of omnichannel transformation, where channels are continuously merged through technology improvements to effectively manage customers' impression of value. Some notable research studies on omnichannel CDO include preference (R. Ebrahim et al., 2016), choice (Trenz et al., 2020), purchase (Singh and Srivastava, 2019), repeat purchase (Tyrväinen et al., 2020), repurchase (Fernandes and Barfknecht, 2020), channel patronage (Kokku, 2021), loyalty (M. Cotarelo et al., 2021). Each of these CDOs represents a

certain stage in the buy-decision process, which includes recognizing the need, doing information searches, evaluating alternatives, making the purchase, and post-purchase activities. The concept has been previously examined within the online, digital, multichannel, and omnichannel framework (Han, 2021; M. Y. Hsieh, 2020; Umut Konuş et al., 2008; Miklošík, 2015). In addition, CPV affects consumer behavior at several phases of the process through which decisions are made, and the way consumers respond to it differs at each of these stages (Philip Kotler & Armstrong, 1994; Solomon et al., 1995). Several research in the CPV literature have investigated the impact of perceived value determinants on customer decision outcomes (CDO) (e.g., Mpinganjira, 2014; Riquelme & Román, 2014; Schramm-Klein et al., 2011). This compilation of research enables a more methodical integration of the influence of various perceived values on CDO in an OMC setting, both in terms of their relative contribution to CDO.

Furthermore, the examination of CPV within the framework of CCI reveals a very disjointed depiction and is in dire need of enhanced integration. For example, research has examined several aspects of CPV, including convenience (Kim *et al*., 2017; Trenz *et al.*, 2020), trust (Fernandes and Barfknecht, 2020), and others. Moreover, earlier research has classified CPV as both a multi-dimensional construct and a unidimensional construct. Consequently, existing studies have either defined CPV as a single, unidimensional construct or as a multi-dimensional construct with several dimensions. Previous research has examined different settings for customer channel integration (CCI), including retail (Kuruzovich *et al.*, 2008), services (Mpinganjira, 2014), e-tailers (Ha and Stoel, 2009). These studies have also explored various combinations of multi-channels, such as stores and online (Emrich *et al.*, 2015), stores-online-catalog (Juaneda-Ayensa *et al.*, 2016). Additionally, researchers have investigated CCI in specific product categories, such as apparel and clothes (Aw, 2019; Juaneda-Ayensa *et al.*, 2016), clothing,

electronic products and books (Mpinganjira, 2014), auto (Kuruzovich *et al.*, 2008). The studies have been conducted in different countries, such as the US (Kim *et al.*, 2017; Montoya-Weiss *et al*., 2003), Spain (Juaneda-Ayensa *et al.*, 2016). Hence, it is difficult to compile the diverse and scattered literature.

Due to its complex and interrelated nature, the main problem with the existing literature on CPV is its fragmented and disconnected nature. Different studies in the CCI context only focus on specific dimensions of CPV without considering the entire construct. In this study, we want to address the varied and disjointed character of the existing literature by connecting all the studies that have examined the qualities of CCI's CPV, either partially or whole, in order to provide a cohesive viewpoint. Hence, our meta-analysis seeks to address several crucial research inquiries: which aspects of perceived value in the CCI setting contribute to CDO, and what is the comparative influence of these CPV factors? Expanding on the many advantages that come with integrating several channels for customers (Goersch, 2002), we categorize the aspects that contribute to consumer perceived value (CPV) based on awareness, convenience, trust, risk, control, ubiquitous customization, seamless experience, and overall CPV. We next analyze how these factors affect customer decision-making outcomes (CDO). As far as we know, there is no study that thoroughly examines the components of CPV that impact CDO in the CCI setting. This meta-analysis is anticipated to offer a methodical synthesis of existing research, therefore contributing to the advancement of knowledge in this particular subject.

This study provides significant contributions to the field of omnichannel research and practice. Through an examination of the factors that influence CDO, such as awareness, convenience, trust, control, risk, omnipresent personalization, seamless experience, and total customer perceived value (CPV), we present a structured

model for comprehending omnichannel CDOs in the current marketplace. This perspective is especially valuable when considering the improvement of the customer's perceived value and its influence on the customer's decision-making process. The strategies that OMC retailers or brands must implement to attract and retain customers are constantly changing, and this relationship between the customer and the brand is a crucial foundation that can be applied broadly. Furthermore, the meta-analysis provides systematic recommendations to OMC merchants during a period of fierce competition and evolving customer expectations. Gaining insight into the many factors that contribute to the creation of CDOs will enable OMC retailers or brands to more effectively use their resources and develop strategies that yield the highest possible returns. In conclusion, this work adds to the existing body of literature by offering a comprehensive viewpoint for future scholars interested in exploring this significant research field.

3.3. Conceptual framework

3.3.1. Customer perceived value with cross channel integration

Value is a subjective and relative notion that has an impact on social behavior and the processes of making decisions. The term can be used in a singular form to represent the outcome of a decision, as mentioned by Boksberger & Melsen (2011) and Mustak et al. (2013). In its plural form, it includes various elements such as standards, rules, criteria, norms, aspirations, and ideals that are used for evaluative judgment, as discussed by Boksberger & Melsen (2011) and Mustak et al. (2013), and Sánchez-Fernández & Iniesta-Bonillo (2009). Value is a subjective and relative term that is shaped by individual viewpoints, unique situations, and the surrounding context. It is crucial to acknowledge that the concept of value, as well as its components, might shift when subjected to diverse situations (C. Xu et al., 2015). According to Y.R.R.Chen (2017), value is the satisfaction of wants and the fulfillment of beliefs or self-image by conforming to social standards. Within the

field of marketing, the term "value" pertains to the concept of "customer perceived value". This concept has significant importance since it directly impacts consumer behavior and the decision-making process. CPV, or customer-perceived value, is the evaluation customers make of what they receive (benefits) compared to what they give up (sacrifices). This concept was first introduced by Zeithaml (1988). However, the task of analyzing value by separating it into specific components or identifying new elements in different situations is still unresolved, as noted by Xu et al. in 2015. The advantages of using a product or service mostly stem from the perceived excellence, reported satisfaction, and perceived ease of use (Parente et al., 2015). Sacrifices typically involve both financial expenditures, such as prices and fees, as well as non-financial costs, including transaction costs, search costs, negotiation costs, and the time invested in the purchase (Kuo et al., 2009).

Previous studies have offered guidance on the advantages of using integrated services across different channels in the context of omnichannel. These benefits include increased awareness (Yeğin and Ikram, 2022), convenience (E. Kim et al., 2017; Manuel Trenz et al., 2020), trust (Fernandes and Barfknecht, 2020), control (Jocevski et al., 2019), personalized experiences across multiple platforms (Hubert et al., 2020), and seamless experience (Mika Yrjölä et al., 2018). Perceived risk is a fundamental concept in the realm of information and communication technology (ICT) and, consequently, in OMC research. It refers to the non-monetary compromises that individuals are prepared to undertake. This concept has been extensively recognized by scholars, including Xu et al. (2015). Steinfield et al. (1999) were the first to identify the presence of possible synergies between physical businesses and websites. MacMillan & McGrath (1997) demonstrated the use of the consumer consumption chain, their interpretation of the purchase and consumption process (PCP) framework, to uncover sources of differentiation that extend beyond the basic product. In 2002, Goersch expanded on the previous works

by highlighting the several advantages that customers may have from the combination of online and offline activities. Additionally, Goersch applied the concept of PCP (Product-Channel-Person) to integrate channel services, going beyond only products. The benefits that have been discovered for customers include increased awareness, trust, convenience, control, personalized experiences everywhere, and improved support. Sacrifice was recognized as a factor influencing the perception of danger. In his 2002 study, Goersch (2002) determined that the primary goal of multi-channel integration should be to provide an exceptional customer experience that is uniform and uninterrupted across all channels. This also has the additional advantage of offering clients a smooth and uninterrupted experience.

In an omnichannel context, previous studies have identified CPV as a significant factor influencing consumer behavior, including intention to purchase (Sullivan & Kim, 2018), and loyalty (Collin-Lachaud & Diallo, 2020),. These studies have highlighted the importance of various CPV elements such as experiential value (Kasilingam & Krishna, 2022), utilitarian value, hedonic value (Akel & Armağan, 2021) in this relationship. Petrick (2004) highlights the need of analyzing different aspects of CPV in order to understand its correlation with consumer behavior variables like as preference and loyalty. The extensive range of CPV dimensions must be consolidated into a certain specified set of dimensions. Since Keith's (1960) groundbreaking research, the notion of CPV has been thoroughly explored through numerous models, including those developed by Sheth et al. (1991), Babin and Attaway (2000), PERVAL (J. C. Sweeney & Soutarh, 2001), and SERV-PERVAL (Petrick, 2002)), among others. Prior meta-analytical studies on consumer behavior have categorized consumer perceived value (CPV) based on existing ideas. Liu-Thompkins et al. (2022) categorized the factors that influence

customer loyalty in the retail industry as cognitive, emotional, and social drivers, drawing upon the research conducted by Verhoef et al. (2009). In their study, Vieira et al. (2018) classified hedonic and utilitarian values by analyzing prior literature on consumer buying behavior. Various empirical research have mostly examined individual advantages, but they have not provided a holistic understanding of CPV in the omnichannel environment. Utilizing these models to inform the current investigation may provide difficulties. Hence, in order to gain a deeper comprehension of CPV within this particular context, it is recommended to utilize the comprehensive framework proposed by Goersch (2002). This approach facilitates a holistic comprehension of CPV in the omnichannel environment by taking into account all relevant elements from a broader perspective.

Table 3.1 provides a comprehensive overview of the seven components that contribute to the perception of value in omnichannel contexts. It includes an explanation of each aspect and highlights the various names used by different studies to refer to the same concept within the sample.

Table 3.1: Factors of consumer perceived value in a cross channel context

Construct & Definition	Variables Included	Code
Overall Customer Perceived Value	Identity expressiveness (perceived benefits), Shopping value Perceived benefit, Perceived Usefulness, Perceived value, Perceived shopping value, Price value, Relative Advantage, Shopping value, Usefulness, Utility of shopping online/offline Value	**CPV**
Awareness Awareness refers to a consumer's brand recall or brand recognition	Communication, Customer satisfaction, external information search, Identity Attractiveness, Information, information quality, Information search, Informative Content, Previous knowledge, Price information retrieval, Product information, Product information retrieval, Relative Advantage learning, Research and info search	**A**

Perceived Risk ***Risk Likelihood*** Perceived likelihood of a possible loss while completing any kind of transaction with the brand ***Risk Severity*** Perceived severity of a possible loss while completing any kind of transaction with the brand	Online / Retail store Transaction / Post-Transaction Risk Likelihood / Severity, Perceived financial risk, Perceived privacy risk, Perceived Risk, Perceived social risk, Perceived uncertainty, Privacy concern, Product uncertainty, Psychological distance, Reactance, Regret, Retailer Uncertainty, Risk, Risk Propensity, Security Risk Perceptions, Uncertainty	**R**
Convenience ***Speed Convenience*** Perceived delay associated with the brand during customer purchase journey ***Effort Convenience*** Perceived effort costs associated with the brand during customer purchase journey ***Flexibility Convenience*** Perceived flexibility associated with the brand during customer purchase journey	Access Convenience, Benefit Convenience, Channel Accessibility, Convenience, cross-channel access convenience, Ease of check out, Ease of communication, Ease of return, Ease of use, Effort Expectancy, Evaluation Convenience, Immediate Possession, M-convenience, Online convenience, Online Post-Transaction Effort Convenience (OPCE), Online Post-Transaction Flexibility Convenience (OPCF), Online Post-Transaction Speed Convenience (OPCS), Online Transaction Effort Convenience (OTCE), Online Transaction Flexibility, Convenience (OTCF), Online Transaction Speed, Convenience (OTCS), Perceived convenience, Perceived convenience value Perceived Ease of Use, Perceived ease of use, Perceived Ease-Of-Use, Perceived ease of use, Post-benefit Convenience, Product fit uncertainty, Purchase effort, Relative Advantage convenience, Retail store Post-transaction convenience (RPC), Retail store transaction convenience (RTC), Search Convenience Search effort, Shopping Efficiency, Time savings, Transaction Convenience	**C**
Trust Trust is the typical customer's readiness to depend on a brand's capability to carry out its tasks across different channels, based on their perception of the brand's competence, compassion, and integrity.	Consumer trust, M-trust, Online Trust, Privacy protection, Relative Advantage information trust, Retailer's uncertainty, Trust in mobile payment, Trust in Online shopping, Trust in retailer, Trust in the service provider	**T**
Perceived Control ***Behavioural Control:*** Consumer's perception of what he can do to influence the situation or event, exemplified by control over procedure ***Cognitive Control:*** Consumers' interpretation of the	Assortment Attractiveness Physical Store, Bargain hunting, Connectedness, Consumer Empowerment, Control, Customization, Involvement, multichannel self-efficacy, Perceived control, Perceived empowerment, Perceived relative advantage, perceived self-efficacy, Perceived self-efficacy, Perceived variety, Personal Innovativeness, purchase	**Cont**

situation, which is exemplified when consumers obtain information ***Decisional Control:*** Whether a customer decides to enter a situation or has perceived alternatives (Averill, 1973)	involvement, Self-expressiveness value, Variety seeking, Variety seeking behavior, Variety-seeking	
Ubiquitous Personalization It is defined as any creation or adjustment or combination of a channel service to fit the individual requirements all across varied brand's channels during purchase journey of a customer	Channel type matching, Compatibility, Customization Perceived Compatibility, Personalisation, Personalization Web personalization	**UP**
Seamless Experience (SE) If all channels are interconnected, customers have the ability to initiate their purchase process on one channel and finish it on another, while navigating through different channels. This creates a smooth and uninterrupted experience that enhances convenience and involvement, while also guaranteeing a consistent brand encounter.Brakus, Schmitt, and Zarantonello (2009) defines brand experience as the subjective, internal consumer reactions (sensations, feelings, and cognitions) as well as behavioral responses elicited by brand-related stimuli that are associated with a brand's design and identity, packaging, communications, and surroundings.	Online shopping satisfaction, Appearance Perception, Brand Experience, Choice Breadth, Consumer service experience consciousness, Customer experience, Customer experience (satisfaction with the experience), Customer satisfaction, Digital Satisfaction, e-shopping experience, Experiential value, M-satisfaction, OC Intensity (perceived consistency and seamlessness), Offline customer experience, Offline satisfaction, Omnichannel retailer quality, omnichannel satisfaction, omni-channel shopping experience, Online customer experience, Online satisfaction, Online shopping experience, Online Shopping experience, Online Shopping satisfaction, Perceived experiential value, "Satisfaction with information online vs offline", Shopping experience online store, "Shopping Experience Physical, Store", showrooming experience Utilitarian/Hedonic Benefits (UHB)	**SE**

3.3.2. Factors of customer perceived value

In order to bring clarity and focus, we adopt Goersch's (2002)framework in a multi-channel context for this study by linking "multichannel integration" to "consumer benefit". Goersch's (2002) study identified seven factors: (i) awareness, (ii) trust, (iii) risk reduction, (iv) convenience, (v) control, (vi) SE, (vii) UP that contribute to the customer experience in an OMC context. We consider these seven factors that define CPV in a multi-channel setting. Table 3.1 presents a description of these seven factors of consumer perceived value in an omnichannel environments. It

includes a definition of each of these aspects, as well as the many labels used to describe the same concept in different studies within the sample.

3.3.2.1. Awareness

Awareness generates knowledge richness (Malik *et al.*, 2013), and is a probability that consumer have information about brand service, products and about all features of the brands. Channel integration enables gathering information, and hence reducing perceived information asymmetry (Cao and Li, 2015). By integrating branding and communication across channels, awareness and recognition are enhanced (Yeğin and Ikram, 2022). Also, initial consideration sets are expanded by seeking information from various touchpoints and channels, such as peers, reviewers, and retailers (Gao *et al.*, 2019).

Importantly, we treat label of price and production information and retrieval (Kuruzovich *et al.*, 2008) as synonymous with awareness in this study as is used by extant literature.

3.3.2.2. Trust

Trust for a brand or organization defined as the level of confidence that the typical consumer has in the brand or organization's capacity to fulfill its intended purpose. (Chaudhuri and Holbrook, 2001) through cross-channel operations as customer believe of their (organization’s) competence, benevolence and integrity (Komiak and Benbasat, 2006; Schramm-Klein *et al.*, 2011). Omnichannel service delivery has a crucial role in establishing trust, which is a fundamental component of consumer perceived value (Dalla Pozza, 2023). Similarly, Helbling *et al.*, 2011 reports that "Trust," a key aspect of multichannel commerce, is one of the aspects that impact a customer's purchasing choice. Also, we treat label of assurance of

privacy protection (Mpinganjira, 2014) as synonymous with trust in this study as is used in the extant literature.

3.3.2.3. Risk *perception*

Extant literature decomposes risk into two dimensions of likelihood and severity (Trenz *et al.*, 2020). Risk likelihood is a perceived likelihood and risk severity is a perceived severity of a possible loss while completing any kind of transaction with the brand or organization. Chen and Dubinsky's (2003) model of CPV included 'perceived risk'. Thus it can be considered that the risk is a factor of CPV as reduction of risk of unavailability of product and/or service results in a higher CPV.

Further, as literature used labels like high perceived risk in online shopping (Kim *et al.*, 2017); online transaction and post-transaction risk likelihood and risk severity (Trenz *et al.*, 2020); perceived risk (Emrich *et al.*, 2015; Singh and Srivastava, 2019); perceived security (Juaneda-Ayensa *et al.*, 2016); product uncertainty, transaction and post-transaction risk, and risk propensity (Trenz et al., 2020); and security risk perceptions (Montoya-Weiss et al., 2003), to refer to risk, we incorporate and treat them as synonymous with risk with the aim of conducting the analysis in this study

3.3.2.4. Convenience

Traditionally, convenience refers to temporal and spatial aspects of the service delivery (e.g., Hoyer and Brown, 1990) that reduces non-monetary costs (Mirsch et al., 2016; Seiders, Voss, Godfrey, et al., 2007), facilitate, serve (Jin and Kim, 2003), provides easy access (Seiders, et al., 2002) during customers purchase and post-purchase journey. CCI enhances convenience (Chong, 2018) and provides consumers with an adequate convenience during their purchase journey like the freedom (Berry *et al.*, 2010), flexibility (Trenz *et al.*, 2020), easy of leaving a

website (Neslin and Shankar, 2009), save time and energy, gain convenience benefits (Meuter *et al.*, 2000), facilitates speed and effort (Choudhury and Karahanna, 2008) through facilitating them with options (Saeed *et al.*, 2003). According to Zeithaml (1988), convenience represents perceived value, a total transaction utility in a judgement stage of customer.

As extant studies explored this construct with various labels like ease of communication (Mpinganjira, 2014); ease of use (Ha and Stoel, 2009); effort expectancy (Juaneda-Ayensa *et al.*, 2016); immediate possession, expected price loss, purchase effort, shopping efficiency (Aw, 2019); online and retail-store transaction and post-transaction effort convenience (Trenz *et al.*, 2020); flexibility and speed Convenience (Seiders *et al.*, 2007); convenience (Emrich *et al.*, 2015); ease of use (Fernandes and Barfknecht, 2020); search effort (Kuruzovich *et al.*, 2008), which we include as convenience in this study.

3.3.2.5. Control

Control has been considered as a component of CPV in several previous studies (e.g., Leckie *et al.*, 2017). In the cross-channel context, control provides value in the following three ways: behavioural control, cognitive control, and decisional control. We therefore consider control as a component factor of CPV.

Further, as control is explored in extant literature with various labels like alternative channel service quality (Montoya-Weiss et al., 2003); bargain hunting, variety seeking (Aw, 2019); perceived variety (Emrich *et al.*, 2015); personal innovativeness (Juaneda-Ayensa *et al.*, 2016); relative advantage, complexity (Kim *et al.*, 2017); perceived self-efficacy (Singh and Srivastava, 2019); situational.

3.3.2.6. Seamless *Experience*

A body of literature in the field of ‘online shopping’, and ‘multichannel’ suggests that “experience or SE” is a construct that consumers perceive as value. These studies includes good shopping experience (Balasubramanian *et al.,* 2005), online shopping experience (Chen and Dubinsky, 2003), and personalized customer experience (Kim *et al.*, 2019).

As extant studies explored this construct with various labels like complementary of customer service experience (J. J. Wu et al., 2018); customer satisfaction (W. J. Lee, 2020); digital satisfaction (Fernandes and Barfknecht, 2020); online shopping experience (Trenz *et al.*, 2020), satisfaction (M. Cotarelo et al., 2021), which we include as SE in this study.

3.3.2.7. Ubiquitous *Personalization*

UP is defined as any creation, adjustment, or combination of a channel service to fit the individual requirements all across varied organization’s channels during purchase journey of a customer *(Ball et al.*, 2006). It includes the notion of entirely individualized 'synergized-channel services', as well as “mass customized” present across varied organization's channel (Pine and Gilmore, 1998) services. Previous studies have considered personalization as a factor of value derived from CCI (e.g., Hubert *et al.*, 2020). Furthermore, as literature studied this construct with various labels like perceived compatibility (Kim *et al.*, 2017), personalization (Mpinganjira, 2014; Tyrväinen et al., 2020), which we include as UP in this study.

3.3.3. Customer Decision Outcomes (CDO) with Customer perceived value

CDO refers to the discrete or sequential choices made by consumers during the process of making a purchase decision. This process includes factors like as personal preferences, intentions, choices, actual purchases, product usage, and brand loyalty. Consumer purchase behavior refers to the systematic process by

which people and groups select, acquire, utilize, and discard items or services to fulfill their desires and requirements (Schiffman and Kanuk, 2009; Solomon, 1995). Literature offers insights into different consumer decision-making models, including the AIDA model (Tosdal, 1925), hierarchy of effects (Lambin & Palda, 1968; Lavidge & Steiner, 1961), hierarchy of sequence (Evan et al., 2006) and Howard Sheth buying behaviour model (Howard & Sheth, 1969), ORCA model (Molenaar, 2010). The five-stage consumer decision-making process, first proposed by Engel et al. (1978), is considered one of the most often referenced and well-known models for understanding consumer buying behavior. The consumer journey comprises five distinct steps that individuals are anticipated to undergo: need recognition, information retrieval, alternative assessment, purchase, and post-purchase evaluation. The model has been previously examined in the online setting (Darley, 2010; Han, 2021; Punj, 2010; Teo & Yeong, 2003), within the digital era (Miklošík, 2015), in the segmentation of multi-channel shoppers (Umut Konuş et al., 2008), and in the context of omnichannel (M. Y. Hsieh, 2020).

Consumer Perceived Value (CPV) plays a role in every step of the decision-making process and has an impact on consumer behavior at each of these phases. However, the specific method in which consumers respond to CPV may differ at each stage (Philip Kotler & Armstrong, 1994; Solomon et al., 1995). Each instance of customer behavior aligns with a certain stage in the consumer purchasing decision-making process. For instance, Kotler and Keller (2016) proposed that preference typically occurs during the option appraisal stage of the consumer decision-making process. Moreover, prior research indicates that preference plays a vital role in and has a favorable impact on purchase intention (Boubker & Douayri, 2020; DAM, 2020). There is a collection of literature that examines the connections between consumer behavior and different stages of the decision-making process. These stages include preference and purchase intention, purchase intention and choice,

choice and purchase, and purchase and use influencing loyalty. For example, Laroche et al. (2001) studied the association of choice with purchase, while Shoemaker et al. (1977) focused on the connection between preference and purchase intention. Vazifehdoost et al. (2014) explored how purchase and use impact loyalty. Consumer behavior, including preference, buy intention, choice, purchase or usage, and loyalty, is influenced by the process conducted throughout each step of the consumers' purchasing decision-making. Based on our findings, it is evident that the influence of CPV on consumers varies throughout the decision-making process, encompassing stages such as preference formation and loyalty. In our study, we refer to this variation as a "consumer decision outcome." This suggests that in order to examine the influence of CPV throughout different stages of the decision-making process, the decision outcomes at each stage need to be combined and their cumulative effect measured. This combined outcome is referred to as the "consumer decision outcome" in this study. Therefore, the consumer decision outcome encompasses both the individual outcomes at each stage and the overall outcome resulting from the combination of these individual outcomes.

In our study, we examined the relationship between preference and CPV in a decision-making process. We hypothesized that preference triggers a series of interconnected and sequential CDOs. To analyze this relationship, we measured CPV by combining individual CDOs that are part of the decision-making process. Although Liu-Thompkins et al. (2022), by seeking support of Dick and Basu (1994), grouped these five constructs together as 'loyalty', incorporating its attitudinal component of preference and affective liking towards other retailers, as well as its behavioral component reflecting intention, repeated patronage, and advocacy, we deviate from this idea and instead turn to the consumer decision-making process to introduce the term CDO.

3.3.4. Customer Decision Outcomes through various labels

CDO is referred to an individual or summation of intra-stage decision made during a purchase-decision process, which comprises of preference, intent, choice, purchase, use, and loyalty. Extant research on CPV and consumer behavior in CCI settings have identified a variety of these customer decision outcomes.

As per the general consensus among scholars, (e.g., Gensler *et al.*, 2012; Montoya-Weiss *et al.*, 2003; Verhoef *et al.*, 2007), in the context of retailing, consumer channel choice comprise of a three-step process, viz. assessment of a differentiator attributes, evaluation of a benefit against cost, and preference. Further, choice is labeled as choice probability (Trenz *et al.,* 2020), which we treat as synonymous with choice.

Preference is a psychological inclination that indicates a consumer's attitude towards a certain brand. (Ebrahim et al., 2016) and is labeled as preference or channel preference in the retailing context (Emrich *et al.*, 2015). Further, Purchase is the process one uses to acquire goods or services to accomplish its goals and is labeled as purchase (Kuruzovich *et al.*, 2008) in the literature, which is considered in this study.

In the literature, "Purchase intention" has also be used as a CDO. Purchase intention is operationalized with labels of E-shopping (Ha and Stoel, 2009), revisit OC (W. J. Lee, 2020), adopt Buy-online, Pickup In-store (Kim *et al.*, 2017), making recommendation (J. J. Wu et al., 2018), purchase (Singh and Srivastava, 2019), repeat purchase (Mpinganjira, 2014; Tyrväinen et al., 2020), repurchase (Fernandes and Barfknecht, 2020), web rooming (Aw, 2019). We treat these labels as synonymous with purchase intention.

Use/Usability experience reflects the perceived ability of the OMC platform to complete shopping activities (Hsia *et al.*, 2020). As literature studied "Use" construct with various labels like online channel use (Montoya-Weiss et al., 2003), and usability experience (Hsia *et al.*, 2020), we treat them as synonymous with "use" in this study.

The final CDO in this study is loyalty, which is defined as a profound and unwavering dedication to repeatedly repurchase or support a chosen product or service, resulting in recurring brand purchases. (Oliver, 1999). As literature studied loyalty construct with various labels like channel patronage (Kokku, 2021), loyalty (M. Cotarelo et al., 2021), patronage intentions (Emrich *et al.*, 2015), we treat them as synonymous with "loyalty" in this study.

Table 3.2 provides an overview of the implications, definition, and various labels used to describe the same concept in different research within the sample.

Table 3.2: Consequence of a consumer perceived value in an Omni-channel content

Construct & Definition	Variables included	Code
Use Usability experience reflects the perceived ability of the Omni channel platform to complete shopping activities.	Actual use, Omnichannel service usage, Online cart use, Online Channel Use, Use Behaviour	**U**
Intention Intentions are mental states in which the agents commit themselves to a course of action. The action plan is the content of the intention while the commitment is the attitude towards this content.	Behavioral intention toward the online store, Behaviour intent web information, Behaviour intent web transaction, Behavioural intention, Behavioural Intention (Showrooming), Behavioural Intention (Webrooming), Behavioral intention, Brand Repurchase Intention, Consumer patronage intention (CPI), Continuance intention, Continuance Intention (CI), cross buying intention, Cross-channel switching intention, Current purchase intent, e-	**I**

	shopping intention, Future use intention, In-store purchase intention, Intention to adopt BOPS, Intention to buy online over offline, Intention to purchase using LBS, Intention to recommendation, Intention to re-visit OMC, Intention to search for information using LBS, Intention to search online vs offline, Intention to use, Intention to use BOPS, Intention to use LBS, Intention to use OMC for shopping, Intention to use the App, Intentions to use, Loyalty intentions, M-Repurchase intention, Omni-channel customer retention intention, Omnichannel shopping intention, Online purchase intention, Online Re-purchase Intention, Patronage Intention, Patronage intention for Online Store, Patronage Intentions, Product review sharing intention, Purchase intention, Recommendation intention, Repeat Purchase Intention, Repurchase Intention, Repurchase intentions, retail app users' continuation intention, Re-use intention, Search intention of product information via the online retailer, Shopping intention, Sustainable Usage Intention, Webrooming Intention, Word of mouth intentions	
Purchase Purchasing is the process one uses to acquire goods or services to accomplish its goals. Referred purchase is a consumer's purchase that is consummated using a referral provided by an online infomediaries	Actual e-shopping purchase, Actual purchase, Actual Purchase Behaviour, Customer Decision, Integration purchase, Online buying Purchase behavior, Purchase Frequency Product, Referred purchase, Shopping behavior, Willingness to purchase from the online retailer	**Pur**
Preference Channel preference refers to a consumer's inclination towards a particular brand, which is shown in their behavior.	Brand Preference, Channel Preference, Integration pre-purchase, Shopping preference (Search stage), Shopping preference Purchase stage), Willingness to buy, Willingness to pay more, Willingness to pay premium	**Pre**
Loyalty Loyalty is defined as a strong and unwavering commitment to continually repurchase or support a chosen product or service in the future, resulting in repeated purchases of the same brand.	Channel Patronage, Customer loyalty, Consumer retention, e-Loyalty, Loyalty, Loyalty to mobile payment, Loyalty to retailer, Offline loyalty, omni-channel customer loyalty, Online loyalty, Retail store Loyalty, Website loyalty, Willingness to patronize the online retailer, Willingness to Pay for the App	**L**

Choice A choice is the range of different things from which a being can choose. The arrival at a choice may incorporate motivators and models.	Choice Probability (CPR)	**Cho**

3.4. Hypotheses Development

3.4.1. Impact of customer perceived value on Customer Decision Outcomes

Prior research have demonstrated that CPV has a significant effect on customer decisions throughout all phases of the decision-making process and has the ability to affect consumer behavior, such as preference (Alamro and Rowley, 2011; Hellier *et al.,* 2003). Existing work provides evidence of the influence of CPV on CDO, including factors such as purchase intention (Qin et al., 2023), actual purchase behavior (Indiani & Febriandari, 2021; Shekhar Singh & Srivastava, 2019), channel patronage (Kokku, 2021), loyalty (Jo, 2023). Therefore, the subsequent hypothesis is put forward:

> **Hypothesis 1**: A high level of customer perceived value has a beneficial influence on the consumer decision outcome in the cross channel integration setting.

3.4.1.1. Awareness and customer decision outcome

Awareness (of organization) is a knowledge richness about the organization (Malik *et al.,* 2013). Customer interaction gives higher awareness. Organizations share information on social media, advertisement, viral video ad, WoM, other activity to give higher awareness to the consumer. Customer often rely on their awareness about the organization and their offerings in the decision-making process because they want to conserve time and make minimal cognitive efforts in their purchasing decisions (Macdonald and Sharp, 2000). In this study, we consider the terms "label

of price and production information" and "retrieval" to be identical with "awareness," as defined by previous research (Kuruzovich *et al.*, 2008).

Channel integration facilitates the collection of information, hence decreasing the apparent imbalance of information (Cao and Li, 2015). Integrating branding and communication across media improves awareness and recognition (Yeğin and Ikram, 2022. Furthermore, the process of expanding initial consideration sets involves gathering information from several touchpoints and channels, including peers, reviewers, and merchants (Gao *et al.*, 2019). Customers frequently depend on their knowledge about the business and its products or services when making judgments, as they aim to save time and minimize mental effort in their purchase choices (Macdonald and Sharp, 2000).

Awareness will affect purchase decision through association, and when a product owns a positive image, it will help in marketing activities (Keller, 1993). Brand awareness significantly impacts consumer choices and is often a primary factor to be taken into account when considering a product category (Hoyer and Brown, 1990). Higher awareness leads to a higher WoM, and purchase intention (Hutter *et al.*, 2013; Tariq *et al.*, 2017), higher preference (Patil, 2017), repurchase intention (Pizzutti et al., 2022), and loyalty (H. K. Chi, 2009). This lead to the following hypothesis:

> **Hypothesis 2**: A high level of awareness has a beneficial influence on the customer decision outcome in the cross channel integration setting.

3.4.1.2. Perceived risk and customer decision outcome

In the cross channel integration setting, risk is analyzed by breaking it down into two components: risk likelihood and risk severity (Trenz *et al.*, 2020). Furthermore, many types of risks are identified, including economic risk, social risk, privacy risk

(Jarvenpaa and Toad, 1996), as well as personal risk and performance risk (Kolesar and Galbraith, 2000). Risk likelihood refers to the subjective estimation of the probability of experiencing a loss while engaging in a transaction with a brand or organization. Risk severity, on the other hand, pertains to the subjective assessment of the seriousness or magnitude of the potential loss. The model of CPV developed by Chen and Dubinsky's (2003) incorporated the concept of 'perceived risk'. Therefore, it may be concluded that risk is a contributing component to the cost per value (CPV) as reducing the risk of product or service unavailability leads to a higher CPV. In addition, previous literature has used various labels to describe different aspects of risk in online shopping. These labels include high perceived risk (Kim *et al.*, 2017), online transaction and post-transaction risk likelihood and risk severity (Trenz *et al.*, 2020); perceived risk (Emrich *et al.*, 2015; Singh and Srivastava, 2019); perceived security (Juaneda-Ayensa *et al.*, 2016); product uncertainty, transaction and post-transaction risk, and risk propensity (Trenz et al., 2020); and security risk perceptions (Montoya-Weiss *et al.*, 2003). In this study, we consider and regard these different kind of risks as identical with perceived risk for the purpose of our analysis.

Customers may enhance the safety and security of their purchasing experience by utilizing a variety of channels. This approach allows them to take use of the benefits offered by each channel and overcome any limitations associated with using a single channel (Zhang *et al.*, 2010). In cross channel circumstances, it is feasible to physically verify items, pick them up, and ensure that the correct payment is made. This leads to a guarantee of a diminished sense of danger. Moreover, when CCI organizations ensure that their branding is integrated and consistent across different channels, it enables customers to associate a positive brand image from one channel with another (Dholakia and Zhao, 2010). This, in turn, helps to reduce the perceived risk that customers may have when making brand choices (Kwon & Lennon, 2009;

Trenz et al., 2020). Existing literature provides evidence for a negative association between risk and customer decision outcomes (CDO) in an organizational marketing context, specifically in terms of customer retention (Y. Li, Liu, Lim, et al., 2018), and customer purchase behavior (Indiani & Febriandari, 2021; H. Yang et al., 2023). Consequently, we put up the subsequent hypothesis:

> **Hypothesis 3**: The perception of risk has a detrimental influence on customer decision outcome in the context of cross channel integration.

3.4.1.3. Convenience and CDO

Traditionally, convenience refers to the time and space aspects of delivering a service (e.g., Hoyer and Brown, 1990), which reduces non-monetary costs (Mirsch et al., 2016; Seiders, Voss, Godfrey, et al., 2007) and makes it easier for customers to access (Seiders, et al., 2002) and use the service (Jin and Kim, 2003) during the purchasing and post-purchasing process. Cross channel integration improves convenience for consumers (Chong, 2018) during their purchasing process. It offers them freedom (Berry *et al.*, 2010), flexibility (Trenz *et al.*, 2020), easy of leaving a website (Neslin and Shankar, 2009). CCI helps save time and energy, and provides convenience benefits (Meuter *et al.*, 2000). It also facilitates speed and effort (Choudhury and Karahanna, 2008) by offering various options to consumers (Saeed *et al.*, 2003). Zeithaml (1988) defines convenience as the perceived value and overall utility of a transaction at the customer's judgment stage.

Previous research has examined this concept using different terms such as ease of communication (Mpinganjira, 2014); ease of use (Ha and Stoel, 2009); effort expectancy (Juaneda-Ayensa *et al.*, 2016); immediate possession, expected price loss, purchase effort, shopping efficiency (Aw, 2019); online and retail-store transaction and post-transaction effort convenience (Trenz *et al.*, 2020); flexibility

and speed Convenience (Seiders *et al.*, 2007); convenience (Emrich *et al.*, 2015); ease of use (Fernandes and Barfknecht, 2020); search effort (Kuruzovich *et al.*, 2008), which we categorize as convenience.

The integration of various channels motivates online customers to make purchases in physical stores (Bendoly *et al.*, 2005; Montoya-Weiss *et al.*, 2003). In addition, it allows in-store customers to access peer or expert evaluations and user-generated content through mobile applications (Dwyer, 2007), hence enhancing convenience. CCI services empower clients to conduct transactions through several channels (Shukla *et al.*, 2013) by providing them with different possibilities (Saeed *et al.*, 2003). According to Choudhury and Karahanna (2008), multichannel literature suggests that convenience in customer-seller contact is determined by two interconnected factors: speed and effort. Prior studies have identified convenience as a crucial factor that affects consumers' assessment of various shopping formats *(*Chiu *et al., 2009;* Liu *et al*., 2015). This, in turn, influences their purchase intentions (Chong, 2018), intentions to use the format in the future (Silva et al., 2018), intentions to repurchase through mobile devices (P. Rodríguez-Torrico et al., 2019), and other related outcomes. Consequently, we put up the subsequent hypothesis:

> **Hypothesis 4**: Convenience has a beneficial influence on customer decision output in the cross channel integration context.

3.4.1.4. Trust and CDO

Trust for a brand or organization is the willingness of consumers of depending on the brand or organization's ability to carry out its function (Chaudhuri and Holbrook, 2001). This trust is established by the belief customer has on the brand or organization due to its competence, benevolence, and integrity (Komiak and

Benbasat, 2006; Schramm-Klein *et al.*, 2011). Trust, a fundamental component of consumer perceived value, is established via the implementation of omnichannel service delivery (Dalla Pozza, 2023). Helbling *et al.*, 2011also found that "Trust" is a key aspect of multichannel commerce that affects customers' buying decisions. In this study, we consider the label of assurance of privacy protection (Mpinganjira, 2014) to be equivalent to trust, as it is commonly employed in existing literature.

Implementing a cohesive strategy for branding and communication, as well as maintaining consistent merchandise and pricing across different channels, helps to alleviate consumers' doubts and strengthen their confidence in the store (Schramm-Klein and Morschett, 2005). This, in turn, leads to customers displaying a preference for the retailer. Cao and Li (2015) propose that enhanced trust is among the five quality characteristics that are favorably influenced by CCI and its impact on customers. Similarly, the value proposition of multichannel retailing, known as "Trust", has been found to have an impact on several aspects of consumer behavior, such as purchase decision (Helbling et al., 2011; Shekhar Singh & Srivastava, 2018), purchase intention (Abbasi et al., 2023), repurchase intention (Sullivan & Kim, 2018) and more. Consequently, we put up the subsequent hypothesis.

> **Hypothesis 5**: Trust has a beneficial influence on customer decision outcome in the cross channel integration setting.

3.4.1.5. Control and CDO

Control, which has been identified as a contributing element in earlier research (e.g., Leckie *et al.*, 2017), offers benefit in three distinct ways: behavioral control, cognitive control, and decisional control (Averill, 1973). Control is regarded as an integral aspect of CPV. In addition, control is examined in existing literature using different terms such as alternative channel service quality (Montoya-Weiss *et al.*,

2003); bargain hunting, variety seeking (Aw, 2019); perceived variety (Emrich *et al.*, 2015); personal innovativeness (Juaneda-Ayensa *et al.*, 2016); relative advantage, complexity (Kim *et al.*, 2017); perceived self-efficacy (Singh and Srivastava, 2019).

Enhancing the sense of control in service settings leads to favorable judgments of the value of the service (Bateson, 2000). Prior to entering a store, customers may utilize online research to identify the specific product features they are willing to compromise on, enabling them to more easily choose the appropriate product while they are at the store. This provides clients with a heightened sensation of control in choosing the appropriate product. Additionally, CCI services empower customers to have complete control over the location, timing, and method of their shopping and delivery experiences (Zhang *et al.*, 2018). These services also offer a wider range of shopping options (Mika Yrjölä et al., 2018), and have been found to influence customers' intentions to shop (Ju Young M. Kang, 2019), repurchase (Pizzutti et al., 2022), and continue patronizing a business (Goraya et al., 2022). Consequently, we put up the subsequent hypothesis:

> **Hypothesis 6**: Control has beneficial impact on customer decision outcome in the cross channel integration setting

3.4.1.6. Seamless experience and customer decision outcome

Existing literature in the domains of online commerce and multichannel indicates that customer experience or seamless experience as a concept that holds value. The research encompass (Balasubramanian *et al.*, 2005), online shopping experience (Chen and Dubinsky, 2003), and customized customer experience (Kim *et al.*, 2019). In previous research, different terms have been used to refer to this concept, such as complementary of customer service experience (J. J. Wu et al., 2018);

customer satisfaction (W. J. Lee, 2020); digital satisfaction (Fernandes and Barfknecht, 2020); online shopping experience (Trenz *et al.*, 2020), satisfaction (M. Cotarelo et al., 2021). In this study, we will refer to this concept as seamless experience.

When a firm properly aligns its functional areas, processes, and capabilities, which are crucial factors for cross channel integration (CCI), it may successfully offer a seamless experience to its consumers (Shukla *et al.*, 2013). If consumers have the ability to link all channels, they may begin their purchase trip at a particular channel, and finish it on another, while moving across multiple channels during the process. This allows for a seamless experience that enhances convenience, engagement, and consistency (Eaglen, 2013). According to Ha and Perks (2005), experiences and the intention to make future purchases are positively correlated.

Customers may utilize many channels to examine the range of products accessible during the pre-purchase stage (Morales *et al.*, 2005). Ensuring that the assortment of products is consistent across different channels makes the process of purchasing more convenient and easy for customers (Verhoef *et al.*, 2007). This allows customers to make the best possible selections (Chang and Wang, 2011) and leads to a happy shopping experience. Omnichannels provide a smooth purchasing experience by effectively integrating several channels, which in turn leads to consumer preference (Min Zhang et al., 2018), patronage (Kokku, 2021), and other benefits. Consequently, we put up the subsequent hypothesis:

> **Hypothesis 7**: Seamless experience has a favorable influence on the customer decision outcome in the cross-channel integrated environment.

3.4.1.7. Ubiquitous personalization and customer decision outcome

Ubiquitous personalization refers to the process of customizing a channel service to meet the specific needs of an individual across several channels inside an organization during a customer's purchasing experience (Ball et al., 2006). The concept encompasses personalized 'synergized-channel services' that are tailored to each individual, as well as the practice of "mass customization" found in many organization's channels (Pine and Gilmore, 1998). Prior research has examined customization as a determinant of value obtained via cross channel integration, as demonstrated by Hubert et al. (2020). In addition, previous work has examined this concept using different terms such as perceived compatibility (Kim *et al.*, 2017), personalization (Mpinganjira, 2014; Tyrväinen et al., 2020), which we refer to as ubiquitous personalization in our study.

Personalization, also known as customization, involves tailoring products and services to meet the distinct requirements, preferences, and actions of individual consumers (Chellappa and Sin, 2005). Organizations, by comprehending the specific wants of particular clients, are able to provide products and services that precisely fulfill those needs (Keeney, 1999). The CCI approach enables organizations to fulfill their goals by implementing an integrated information system, maintaining a consolidated customer database, and aligning marketing and services (Cao and Li, 2015). Prior research has examined customization as a determinant of value obtained via CCI (e.g., Hubert *et al.*, 2020) that contributes to preference (Zhang *et al*., 2018), loyalty (Jo, 2023), and other outcomes. Consequently, we put up the subsequent hypothesis:

> **Hypothesis 8**: Ubiquitous personalization has a favorable influence on the customer decision outcome in the cross-channel integrated environment.

3.5. Method

3.5.1. Literature search method

A meta-analysis was conducted using peer-reviewed academic studies focused on perceived value in the CCI setting. In order to mitigate the effects of publication bias, this study employed a comprehensive literature search across many channels, including Scopus, EBSCO host, Elsevier, ProQuest, Science direct, Emerald, and Google scholar. The electronic databases were queried for publications with titles and/or abstracts that included at least one of the search phrases from three topics, by connecting the strings using the Boolean operators (AND and OR). The keywords used include "Omni channel" OR "Cross-channel integration" OR "Multi-channel" AND "value" OR "benefit" OR "utility" AND "preference" OR "Choice" OR "purchase intent" OR "purchase" OR "use" OR "loyalty". The research on multi-channel began in the early 2000s. The articles evaluated for this study span from 2000 to October 2023, with the search conducted in the first week of November 2023. During this process, a total of 173,970 search results were obtained from various sources, including Google Scholar (172,000), ProQuest (1,300), EBSCO (400), JStor (250), and Science Direct (20). Out of these, 2,965 articles were read, with Google Scholar (1,000), ProQuest (1,300), EBSCO (400), JStor (250), and Science Direct (15) contributing to the count. However, as the reading progressed, the themes of the articles started to become less focused. A total of 875 distinct articles were discovered during the search done in November 2023, with 449 found on Google Scholar, 274 on ProQuest, 108 on EBSCO, 34 on JStor, and 10 on Science Direct. After eliminating duplicate and overlapping articles across the databases, these were the final count.

Theme: Value Preference Omni-channel

Search String:

((“Omni channel” OR “Cross-channel integration” OR “Multi-channel”) AND (“value” OR “benefit” OR “utility”) AND (“preference” OR “Choice” OR “purchase intent” OR “purchase” OR “use” OR “loyalty”))

Out of the 875 articles discovered, all of them are studies conducted on one of the eight keywords mentioned above. Therefore, any articles that were not published works (including 2 unpublished theses), not academic studies (seven in total), or not related to the marketing context (35 studies) were excluded. 44 articles were excluded and 831 were assessed for further analysis.

Based on the study objective, a set of selection criteria was used to evaluate the 831 articles obtained via the search. The evaluation of titles and abstracts at this stage was guided by the inclusion and exclusion criteria derived from Watson *et al.* (2018) and is presented below:

Study:

Inclusion: Original empirical and theoretical/conceptual, peer-reviewed journal articles

Language:

Inclusion: English

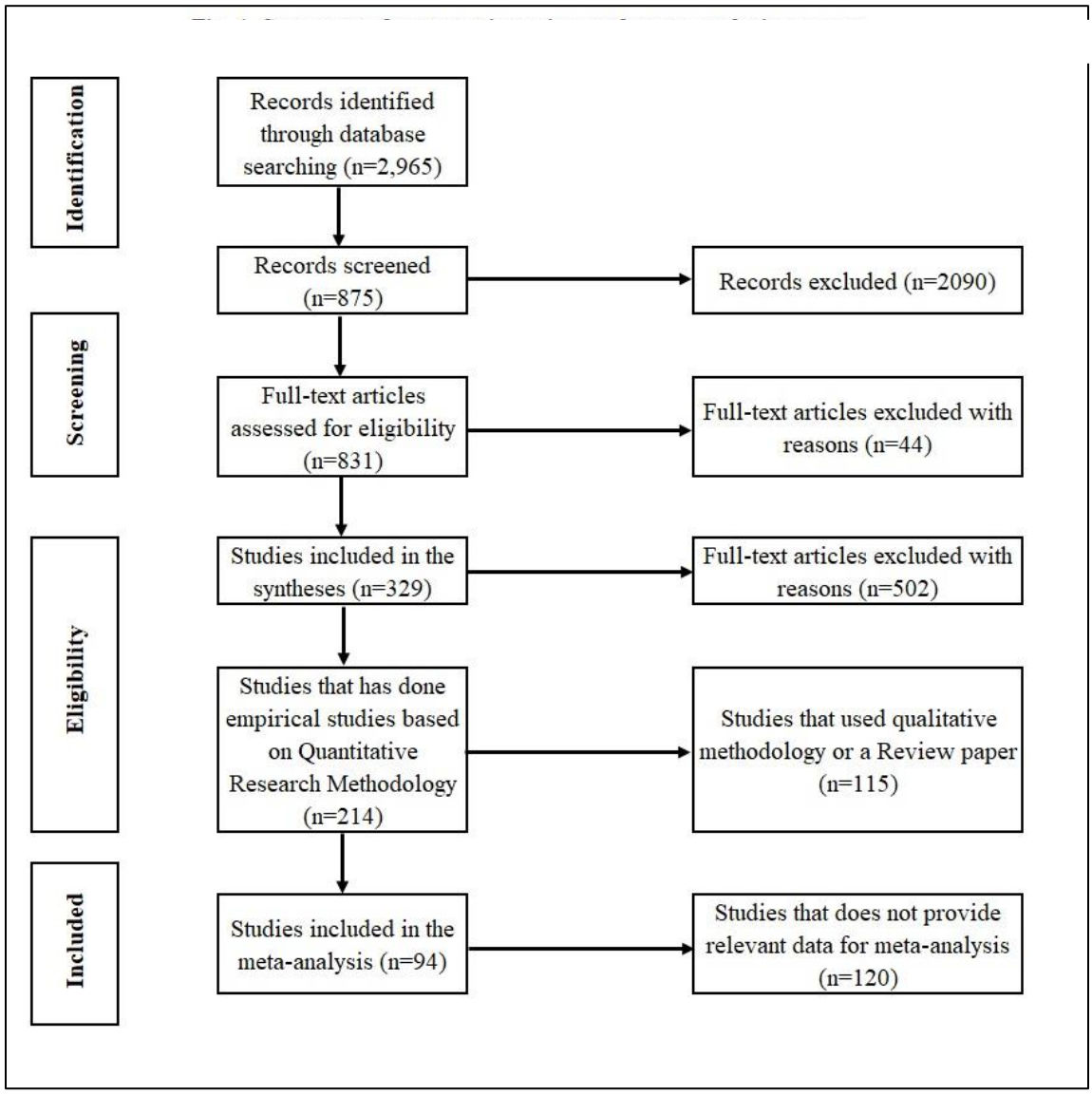
Exclusion: Non-English

Sector:

Inclusion: Omni channel/cross channel integration

Exclusion: Non-Omni channel

Figure 3.1 Summary of systematic review and meta-analysis process


Identification
Records identified through database searching (n=2,965)
Screening
Records screened (n=875)
Records excluded (n=2090)
Full-text articles assessed for eligibility (n=831)
Full-text articles excluded with reasons (n=44)
Eligibility
Studies included in the syntheses (n=329)
Full-text articles excluded with reasons (n=502)
Studies that has done empirical studies based on Quantitative Research Methodology (n=214)
Studies that used qualitative methodology or a Review paper (n=115)
Included
Studies included in the meta-analysis (n=94)
Studies that does not provide relevant data for meta-analysis (n=120)

Relevance:

Inclusion: consumer behavior of "preference" OR "Choice" OR "purchase intent" OR "purchase" OR "use" OR "loyalty" due to perceived value of Omni channel,

Exclusion: Unrelated to the perceived value in an Omni channel environment

In order to be eligible for inclusion in the final sample, the research must be a published or in-progress academic research that specifically examines consumer behavior related to "preference," "choice," "purchase intent," "purchase," "use," or "loyalty." After applying these criteria, a total of 329 articles were retained in the collection. These articles were excluded because they did not meet the criteria for being in an omni-channel context (173 articles), did not align with the objective of the study (43 articles), had a supply-side perspective (113 articles), lacked relevant independent variables (103 articles), or lacked relevant dependent variables (70 articles).

Upon conducting a thorough analysis of these articles, it was discovered that the three sets of keywords in question are present and pertinent to the study's objective. However, it was determined that these articles do not adhere to quantitative research methodology. As a result, an additional 115 articles were excluded. These excluded articles either employed qualitative research methodology (29), were bibliographies (2), conceptual in nature (32), literature reviews (43), meta-analyses (6), or special issue introductions (3).

In addition, the papers were required to include the necessary statistical information for meta-analysis, such as sample size, Pearson correlation, and significance of the correlations. As a consequence, one hundred twenty research were excluded. Thus, a grand total of ninety-four articles remained, adhering to the set criteria.

Table 3.3 consists of ninety-four papers that have conducted quantitative studies on the construct of interest. The factors of CPV and aspects of consumer behaviour have been summarized in the document. The literature provided includes quantitative data, as well as information on the nation of study, product category, OMC channels (such as physical stores, online platforms, catalogues, and other

research areas), channel paradigm (OMC or MC), and study context (such as retail, service, or other).

We also include Table 3.4, which presents further information on these ninety-four papers. This includes details on the components examined, the fundamental theory underlying the study, the OMC capabilities assessed, the collection of sample size, and the techniques of analysis employed by these studies.

Kirca *et al.* (2005) asserts that a meta-analysis may be performed with a minimum of three papers. A total of eight perceived value elements that influence customer decision outcome were discovered in the cross channel integration context. Upon doing a thorough analysis of these publications, it was discovered that out of the eight components analyzed (convenience, control, risk, seamless experience, trust, ubiquitous personalization, and customer perceived value), seven of them were studied three or more times and were found to have connections with customer decision outcome in the cross channel integration setting. As a result, these seven factors were included in the analyses. Due to the limited availability of qualified articles on the subject, the study of awareness had to be discontinued. In addition, as literature employed several terms to refer to the main concepts, we include and consider them as equivalent for the purpose of our research in this study, as explained before.

Table-3.3: Summary of relationship between factors of CPV and CDO

Author Name	Research Area		Channel Paradigm*		Channel studied				Product Category	Country	Context			CPV Factors	CDO
	Cnl	Bnd	MC	OMC	Store	OnL	Cat	Others			Ret	Serv	Oth		
(Kuruzovich et al., 2008)	√		√		√	√			Automobile	US	√			Awareness, convenience	Purchase
(S. Ha & Stoel, 2009)	√		√		√	√			Apparel	US	√			Convenience, trust, CPV	Intention
(Montoya-Weiss et al., 2003)	√		√		√	√			Financial institution	US		√		Perceived Risk	Use
(Trenz et al., 2020)	√		√		√	√			Coffee machine	Germany	√			Convenience and perceived risk	Choice Probability (CPR)
(Emrich et al., 2015)	√		√		√	√			DVD player / movies, interior accessories	European countries	√			Perceived Control, convenience, risk	preference, patronage intention
(Choudhury & Karahanna, 2008)	√		√		√	√			auto insurance	US		√		CPV, trust, awareness, convenience	Behaviour intention

(Mpinganjira, 2014)	√		√		√	√			General	South Africa	√			Ubiquitous Personalization, convenience, trust	Repeat Purchase Intention
(Kleinlercher et al., 2020)	√			√	√	√			Apparel, electronics, entertainment, cosmetics, furniture, housewares, sporting goods, craft goods, and toys	Austria, Germany and Switzerland	√			Perceived Control, convenience, seamless experience,	Purchase
(E. Kim et al., 2017)	√			√	√	√			computer, t-shirt	US	√			Ubiquitous Personalization, perceived control, perceived risk	Intention to adopt and use BOPS
(Shekhar Singh & Srivastava, 2019)	√		√			√		Desktop, laptop, Mobile	Fashion, electronics	India	√			CPV, risk, trust, perceived control	Purchase intention, actual purchase behaviour

(Mitxel Cotarelo et al., 2021)	√		√		√	√			fashion, accessories and more	Spain	√			CPV, SE	Loyalty
(Aw, 2019)	√		√		√	√			Apparels	Malaysia	√			Perceived Control, convenience	Webrooming Intention
(W. J. Lee, 2020)	√			√	√	√			Apparels	Korea	√			Convenience, SE	Intention to re-visit OMC
(Rehman et al., 2022)	√	√	√			√		Mobile	Mobile phone	Egypt	√			SE, CPV, price perception, awareness	Brand Repurchase Intention, brand preference
(Frasquet & Miquel, 2017)	√		√		√	√			Apparels	Spain & UK	√			Seamless Experience	Loyalty
(Juaneda-Ayensa et al., 2016)	√			√	√	√		Company website, social media, mobile app	Fashion	Spain	√			Perceived Control, perceived risk, convenience	Purchase intention

(Fernandes & Barfknecht, 2020)	√			√	√	√		Mobile shopping application	General	South Africa	√			SE, awareness, convenience, trust	Repurchase intention
(Kokku, 2021)	√		√	√	√	√		email, shopping app, social media, chat box, e-catalogs, blogs, and all other possible ways	General	India	√			Customer Perceived Value	Channel Patronage
(Tyrväinen et al., 2020)	√			√	√	√			General	Finland & Sweden	√			Ubiquitous Personalization	Word of mouth, repeat purchase intention

(J. J. Wu et al., 2018)	√			√	√	√			Clothes	Mongolia	√			Trust	Recommendation intention
(Y. Li, Liu, Huang, et al., 2018)	√			√	√	√			General	China	√			Perceived Risk	Showrooming, retention
(A. N. H. Le & Nguyen-Le, 2020)	√			√	√	√			electronic appliances, mobile carriers and devices, mother and baby products,	Vietnam	√			Perceived Control, SE, trust	Patronage Intention
(Mishra et al., 2022)	√			√	√	√			General	India	√			Trust, perceived control	Retention

(Jayasingh et al., 2022)	√			√	√	√			Sporting goods	India	√			Convenience, CPV	Omni-channel shopping intention
(Silva et al., 2018)	√			√	√	√		Smart phones, tablets, laptops	General	Portugal	√			Perceived Risk, UP, CPV, convenience	Use intention
(W. Gao & Fan, 2021).	√	√		√	√	√			General	China	√			Seamless Experience	Repurchase intention, word of mouth
(Goraya et al., 2022).	√			√	√	√			Mobiles, tablets, and laptops as search products	Multiple through www.wjx.cn	√			Perceived Control, convenience, CPV	Patronage intention
(Xiaoxia Chen et al., 2022)	√			√	√	√			new agricultural products	China	√			Seamless Experience	Loyalty

(P. Rodríguez-Torrico et al., 2019)	√			√	√	√		Mobile (smart phone or tablet)	Clothing	Spain	√			SE, trust, convenience	Repurchase intention
(Sun et al., 2020)	√			√	√	√		Mobile	restaurants	China		√		Seamless Experience	omnichannel service usage
(X. Chen, Sun, et al., 2022)	√		√			√		Website	General	China	√			Ubiquitous Personalization	Loyalty
(Abbasi et al., 2023)	√		√		√	√		Retail app	General	Malaysia	√			Awareness, trust	Continuation intention
(S. Chatterjee et al., 2021)	√		√		√	√			General	India (online survey)	√			SE, UP, CPV, perceived risk	OMC use intention

(Gasparin et al., 2022)	√		√		√	√			Technology, home appliance, fashion industry, entertainment, self-enhancement.	Cloud Research (borderless)	√			Perceived Control, awareness, perceived risk	Repurchase intentions, word of mouth
(Haridasan et al., 2021)	√		√		√	√			General	India	√			Convenience, perceived control, awareness, CPV	Loyalty
(Bernhard Swoboda & Fränzel, 2022)	√		√		√	√			Fashion	Germany	√			Seamless Experience	Purchase

(Min Zhang et al., 2020).	√		√		√	√			Suitcase, denim jacket, desk lamp, USB memory stick, Bluetooth headset, and sunglasses	China	√			Perceived Risk	Purchase intention
(Kasilingam & Krishna, 2022)	√		√		√	√		IOT services	General	India	√			Convenience	Intention to use, purchase
(A. Wong & Haque, 2022).	√		√		√	√			Footwear	Bangladesh	√			Trust	Purchase intention, word of mouth
(Min Zhang et al., 2018)	√			√	√	√			General	China	√			Perceived Control, trust	patronage intention
(Cattapan & Pongsakornrungsilp, 2022).	√			√	√	√			Luxury fashion	Thailand	√			Perceived Risk	Purchase intention

(WANG & JIANG, 2022)	√			√	√	√			General	China	√			Ubiquitous Personalization, convenience, SE	Omni-channel customer retention intention
(Levin et al., 2005)	√		√		√	√			Clothing, Books, electronic entertainment products, and computer products	US	√			Customer Perceived Value	Shopping preference
(W. M. Lim, 2015)	√		√		√	√			Beauty products, electronics, games, and property	Malaysia	√			CPV, SE, trust, convenience	e-shopping intention

(Pham & Ahammad, 2017)	√		√		√	√			Electronics, household products, fashion, books and hotel accommodation.	UK	√			Awareness, convenience, UP	Repurchase intention, word of mouth, purchase
(Sullivan & Kim, 2018).	√		√			√		Online Shopping Websites	General	South Korea	√			CPV, perceived risk, trust	Repurchase intention
(Close & Kukar-Kinney, 2010)	√		√		√	√		Mobile	General	US				Awareness	Purchase intent, use, purchase
(Jung Hwan Kim et al., 2009)	√		√		√	√			Fashion apparel	US	√			Convenience, awareness, UP	e-Loyalty
(Teo & Liu, 2007)	√		√		√	√			Books, music, or travel	US, Singapore, China	√			Trust, perceived risk	Purchase

(Vlachos & Vrechopoulos, 2008).	√		√		√	√	√		Core mobile services (e.g. voice services) and music content consumers	Greece		√		CPV	Buying intention
(Fiore et al., 2005).	√		√		√	√			Apparel	US	√			Seamless Experience	Attitude towards online retailer, willingness to purchase, willingness to patronize
(J. Kim & Lennon, 2013)	√		√			√			Apparel, electronics goods, household goods, and others	US	√		Web site	Perceived Risk	purchase intention
(A et al., 2005)	√		√		√	√			General	US		√		CPV	

(Adapa et al., 2020).	√			√	√	√			Perfume (hedonic)	Multiple through Amazon Mechanical Turk (MTurk)	√			Perceived Risk, CPV	Loyalty, Intention to use
(Omoregie et al., 2019)	√		√		√	√			Banking products	Ghana		√		Trust, CPV	Loyalty
(J. Martin et al., 2015)	√		√		√	√			Grocery	Australia	√			Convenience, UP, perceived control, CPV, SE, trust, risk	Online Re-purchase Intention
(J. Yoo & Park, 2016)	√		√		√	√			Luxury	South Korea	√			Perceived Control	
(Pagani et al., 2019)	√			√	√	√			Perfume (hedonic)	France	√			Perceived Risk	Trust

(Y. Li, Liu, Huang, et al., 2018)	√		√			√			General	China	√			Perceived Risk	Loyalty
(Falk et al., 2007)	√		√		√	√			Investment services	Germany		√		CPV, perceived risk, trust	Intention to use
(Rose et al., 2012).	√		√			√		Website	General	USA and Europe				SE, perceived control, CPV, trust	Online Repurchase Intenon
(Ryu & Fortenberry, 2021)	√			√	√	√			General	US	√			Convenience	
(Hossain et al., 2020) .	√			√	√	√		Mobile	General	Australia		√	Banking	CPV	Cross buying intention
(Hahn & Kim, 2009)	√		√		√	√			Apparel	US	√			Trust	Online search and offline behaviour intention

(Qimei Chen et al., 2005)		√	√		√	√			Apparel	US	√			Trust	Online and in-store purchase intention
(Gan & Wang, 2017)	√		√		√	√			General	China	√			Perceived Risk	Purchase intention
(Frasquet et al., 2017).	√		√		√	√			Apparel	UK and Spain	√			Customer Perceived Value	Loyalty
(Azad & Kircova, 2023)	√		√		√	√			Grocery	Turkey	√			Seamless Experience	Continuance Intention (CI), eWOM
(Qin et al., 2023)	√		√		√	√			General	China		√	Live streaming	Customer Perceived Value	Purchase intention
(Stocchi et al., 2019)	√	√	√		√	√		Brand mobile app	SNS apps, games and utilities (e.g., maps)	UK		√		CPV, perceived risk	Intention to use the App, willingness to pay for the App, word of mouth

(Mengyao Zhang et al., 2023)	√		√		√	√			Agricultural products	China	√			Convenience	Purchase intention and behaviour
(Chai & Wang, 2022)	√			√	√	√			General	China	√			Customer Perceived Value	Sustainable Usage Intention
(Rippé et al., 2016)	√			√	√	√		Mobiles	Tablet	US	√			Perceived Control	Purchase intention
(Amit Shankar, 2021)	√			√	√	√			Banking services	India		√		Convenience	Webrooming Intention
(E. Kim, 2021)	√			√	√	√			General	US	√			CPV, perceived risk	Intention to search for information and use LBS

(Indiani & Febriandari, 2021)	√			√	√	√			General	Indonesia	√			CPV, perceived risk	Online purchase intention, actual purchase
(Ana Mosquera et al., 2018)	√			√	√	√		Smartphones	General	Spain	√			Convenience	Use intention, and behaviour
(L. W. Wu et al., 2021)	√			√	√	√			General	Taiwan	√			Seamless Experience	Online / offline loyalty
(L. W. Wu & Tang, 2022)	√			√	√	√		Mobile	Apparel	Taiwan	√			Trust	Loyalty to retailer and mobile payment

(H. Yang et al., 2023)	√			√	√	√			General	Bangladesh	√			Trust, perceived risk, CPV	Shopping intention & behaviour
(Jin Feng Wu & Chang, 2016)	√			√	√	√			General	China	√			Convenience	Online purchase intention
(M. Hamouda, 2019)	√			√		√		Bank branch	Banking	Tunisia		√		Customer Perceived Value	Loyalty
(Mishra et al., 2022)	√			√		√			General	India	√			Seamless Experience	Consumer patronage intention
(Kihyung Kim et al., 2020)	√			√		√			General	Korea	√			Convenience	Behavioural intention and use
(Geng & Chang, 2022)	√			√		√			General	China	√			Convenience	Continuance intention

(Qing, 2022)	√			√		√			Consumer Package Goods	China	√			Convenience	Customer Decision
(Chaudhary et al., 2022)	√			√		√			Fashion	India	√			Customer Perceived Value	Continuance intention, actual use
(Song & Jo, 2023)	√			√		√			General	Korea	√			Convenience, CPV, perceived risk	Continuance intention
(Elareshi et al., 2023)	√			√		√			Banking	Jordan		√		Convenience, CPV	Behavioral intention, customer loyalty

(T. Chi et al., 2023)	√			√		√			Fashion rental services	US		√		Perceived Risk	Purchase intention
(Mukherjee & Chatterjee, 2021)	√			√		√			Microwave oven (Utilitarian product), Smart TV (hedonic)	India	√			SE, perceived control, perceived risk, convenience	Intention to search and buy online vs offline
(Herrero-Crespo et al., 2022)	√			√		√			Apparel	Spain	√			Customer Perceived Value, convenience	Behavioural intention (webrooming & showrooming)
(Ju Young M. Kang, 2019)	√			√		√			fashion	US	√			Perceived Control	Omnichannel shopping & Product review sharing intention

(Jo, 2023)	√			√		√			General	Korea	√			Convenience, UP, CPV, convenience	Recommendation intention, loyalty

Note: The below symbols indicates:

Cnl – Channel, Bnd – Brand, OnL – Online, Cat – Catalogue, Ret – Retail, Serv – Service, Oth - Others

Table-3.4: Summary of the focal studies along with other details

Author Name & Year	Factors (of interest) investigated	Core Theory Applied	OMC Capabilities	Sample	Analysis Method deployed	CPV Factors	CPV Factor Code-1	CDO
Kuruzovich et al., 2008	Price information retrieval, search effort, referred purchase	Need fulfillment theory	Online information retrieval	6971 consumers	Three-stage least square (3SLS) estimation	Awareness, convenience	A, **C**	Purchase
Ha & Stoel, 2009	customer service, privacy, security, atmospheric, experiential, usefulness, trust, enjoyment, e-shopping intention	The technology acceptance model (TAM), the theory of reasoned action (TRA), the theory of planned behavior (TBB)	Ee-shopping quality; Website design, consumer service, privacy/security, atmosphere/experiential	298 college students	Structural equation model (SEM)	Convenience, trust, CPV	CPV, **C, T**	Intention

Montoya-Weiss et al., 2003	Security Risk, Service Quality, online channel use	Technology adoption and diffusion theory and adaptation level theory	Navigation Structure Perceptions, Information Content Perceptions, Graphic Style Perceptions, Information Content Perceptions, Graphic Style Perceptions, Navigation Structure Perceptions	1137 customers and 493 students	maximum-likelihood simultaneous using LISREL-VII	Perceived Risk	R	Use
Trenz et al., 2020	convenience, risk, product uncertainty, online shopping experience, risk propensity	Not specified	Omnichannel integration of acquisition and recovery	778 consumers	Partial least squares structural equation modeling (PLS-SEM)	Convenience and perceived risk		Choice Probability (CPR)
Emrich et al., 2015	variety, convenience, risk, channel preference, channel patronage inention	Negativity bias theory	Channel (full integration, asymmetrical integration, no integration), and assortment (subsititutive, complementary, and independent relations) structure	959 respondents and2005 respondents	SEM	Perceived Control, convenience, risk	Cont, C, R	preference, patronage intention

Choudhury & Karahanna, 2008	convenience, trust, efficacy of information acquisition, relative advantage of an electronic channels, behaviour intent: web	Innovation diffusion theory	Reletive adtange of electronic channels in four purchase stages of requirements determination, vendor selection, purchase, and after-sales service	338 faculty and staff at a large university	PLS-SEM	CPV, trut, awareness, convenience	CPV, T**, A, C**	Behaviour intention
Mpinganjira, 2014	Personalisation, ease of communication, privacy protection, repeat purchase intention	Not specified	Nil	201 online customers	Structural Equation Modelling was used to analyse the data using SPSS/Amos version 21	Ubiquitous Personalization, convenience, trust	UP, C, **T**	Repeat Purchase Intention
Kleinlercher et al., 2020	Involvement, convenience, time savings, online/physical store shopping experience, assortment attractiveness, webrooming, purchase	Anticipated utility theory	Price and assortment	1497 customers	Binary logistic regression analysis using SPSS.	Perceived Control, convenience, seamless experience,	Cont, **C, SE**	Purchase

E. Kim et al., 2017	Perceived Risk, Convenience (location), Product involvement	Diffusion-of-Innovations (DOI) theory	Buy-Online, Pickup In-Store (BOPS)	371 consumers	Hierarchical multiple linear regression was performed using SPSS 18.0	Ubiquitous Personalization, perceived control, perceived risk	UP, C, R	Intention to adopt and use BOPS
Singh & Srivastava, 2019	perceived usefulness, perceived risk, perceived self-efficacy, purchase intention, actual purchase behaviour	TPB, TAM	Nil	344 customers	SEM	CPV, risk, trust, perceived control	CPV, R,T, C	Purchase intention, actual purchase behaviour
Cotarelo et al., 2021	seamless and consistent omni-channel experience (intensity), satisfaction, loyalty	Not specified	OC intensity	285 students and buyers who used click and collect system	SmartPLS-SEM	CPV, SE	CPV, **SE**	Loyalty
Aw, 2019	Shopping motivation - Efficiency shopping, bargain hunting, variety seeking. Webrooming	Information processing and uncertainty reduction theories	Webrooming	300 young shoppers	Partial Least Square Structural Equation Modelling (PLS-SEM)	Perceived Control, convenience	Cont, C	Webrooming Intention

Lee, 2020	Perceived convenience, customer satisfaction,intention to re-visit OMC	Not specified	Integrated Promotion (IP), Integrated Transaction Information (ITI) [29], Integrated Product & Pricing Information (IPP), Integrated Information Access (IIA), Integrated Order fulfilment (IOF), Integrated customer service (ICS)	479 students having atleast one-time online shopping experience	PLS-SEM	Convenience, SE	C, SE	Intention to re-visit OMC
Rehman et al., 2022	Brand experience, functional benefits, attribute perception, price perception, appearance perception, appearance perception, brand repurchase intention, brand preference	Self-congruity theory	Nil	325 respondents	SEM was conducted using AMOS software	SE, CPV, awareness	SE, CPV, A	Brand Repurchase Intention, brand preference

Marta Frasquet & Miquel, 2017	Overall satisfaction, online/offline loyalty	Not specified	34 items measurement scale developed	380 and 381 multi-channel shopper in Spain and UK, respectively	EQS 6.1	Seamless Experience	SE	Loyalty
Juaneda-Ayensa et al., 2016	Personal innovativeness, effort expectancy, personal security, purchase intention	Unified Theory of Acceptance and Use of Technology (UTAUT2) model		628 customers of the store Zara	PLS-SEM	Perceived Control, perceived risk, convenience	Cont, R**, C**	Purchase intention
Fernandes & Barfknecht, 2020	Informative content, Perceived ease of use, trust, entertainment, Hedonic & Utalitarian shoppers value	The extended TAM, specifically the TAM3, and perceived value theory	Informative content, entertainment	245 consumers who had previously shopped via a mobile shopping application	PLS-SEM	SE, awareness, convenience, trust	SE, A**, C, T**	Repurchase intention
Kokku, 2021	shopping value, utilitarian and hedonic benefits, channel patronage	Not specified	Not discussed	308 software Yuppy employees	IBM SPSS 25.0 and PLS-SEM	Customer Perceived Value	CPV	Channel Patronage

Tyrväinen et al., 2020	cognitive and emotional customer experience, personalization, word of mouth, repeat purchase intention	Not specified	Not discussed	2084 finnish and 2334 swedish consumers	PLS-SEM	Ubiquitous Personalization	UP	repeat purchase intention
J. J. Wu et al., 2018	Trust, intention to recommendation	Schema theory	Service quality: Complementary of interaction, environment, and outcome quality	474 respondents	SEM	Trust	T	Recommendation intention
Li et al., 2018	Retailer uncertainty, identity attractiveness, showrooming, loyalty	Push-Pull-Mooring (PPM) framework	10 items scale used on CCI	259 respondents having experience of an omnichannel retailer	SPSS 19.0, LISREL	Perceived Risk	R	retention
Le & Nguyen-Le, 2020	Customer empowerment, customer experience, trust, variety-seeking, patronage intention	Stimulus-organism-response (SOR) framework	Channel-service configuration (Breadth of channel-service choice (BCSC), Transparency of channel-service configuration (TCSC), Integrated interaction (Content and process consistency)	312 omnichannel customers	PLS-SEM	Perceived Control, SE, trust	Cont, SE**, T**	Patronage Intention

Mishra et al., 2022	Customer empowerment, satisfaction, unreliability (risk & trust), consumer retention	SOR	Alignment of fundamentals, and Centralization of Back-end system	427 consumers	SPSS AMOS 25 and PROCESS Macros	Trust, perceived control	T, **Cont**	Retentio n
Jayasingh et al., 2022	Performance expectancy, Effort expectancy, Facilitating conditions, Hedonic motivation, perceived value, Omni-channel shopping intention	UTAUT2	Not discussed	406 respondents	Structural equation modeling (SEM) was conducted using IBM SPSS 28.0 and IBM Amos 28.0 for	Convenience, CPV	C, CPV	Omni-channel shopping intention
Silva et al., 2018	usefulness, ease of use, and compatibility, risk, customer experience, future use intention	TAM, TRA, Theory of diffusion of innovations, TBA, and Attitude-behavior theory	Not discussed	190 respondents	SPSS & AMOS	Perceived Risk, UP, CPV, convenience	R, UP**, CPV, C**	Use intention

Gao & Fan, 2021.	Offline & Online experience, and satisfaction	Not specified	Not discussed	265 survey respondents	polynomial regression analysis	Seamless Experience	SE	Repurchase intention
Goraya et al., 2022.	perceived empowerment, perceived assortment structure, perceived benefits	Self-determination theory	consistent brand promotions and advertisements, consistent product and price, inventory information, promotion integration, collect, return, repair, or exchange integration	304 (search product) and 307 (experience product) responses for study 1 and study 2, respectively	SmartPLS 3.2 SEM	Perceived Control, convenience, CPV	Cont, C**, CPV**	Patronage intention
Xiaoxia Chen et al., 2022	Experience, loyalty	SOR	Products collaboration (PROC), Price collaboration (PRC), Sale promotional collaboration (SPC), Service and distribution collaboration (SDC)	550 agri-fresh produce omni-channel customers.	AMOS	Seamless Experience	SE	Loyalty

Rodríguez-Torrico et al., 2019	affective (M-satisfaction) and cognitive (M-trust and M-convenience), M-repurchase intention	SOR	Navigation m-experience: Visual Appeal, Interactivity, Enjoyment, Personalization. Safety m-experience: Reputation, Guarantees, Security and Privacy Mobile ubiquity Table	122 customers	PLS SEM	SE, trust, convenience	SE, T**, C**	Repurchase intention
Sun et al., 2020	satisfaction, omnichannel self-efficacy, Mobile identity, Omnichannel service usage	Social cognitive theory (SCT)	Mobile identity, Integration quality, Transparency of Channel Service, Breadth of Channel Choices, Content & Process Consistency	401 qualified samples	PLS SEM	Seamless Experience	SE	omnichannel service usage
Xinyu Chen et al., 2022	personalization, trust, reactance, privacy concerns, website loyalty	Exchange theory, Reactance theory	Website	270 qualified respondents	AMOS version 20 for confirmatory factor analysis (CFA), moderation analysis was	Ubiquitous Personalization	UP	Loyalty

					conducted using SPSS version 22			
Abbasi et al., 2023	utilitarian and hedonic performance confirmation and trust (System, Service and information qualities), attractiveness of alternatives, continuation intention	SOR and information system success model	Retail app	435 respondents	The study analyzed the data using a hybrid approach incorporating **partial least squares structural equation modeling** and **deep learning (artificial neural network)**.	Awareness, trust	A, T	Continuation intention
Chatterjee et al., 2021	choice, content consistency, and customization, perceived benefits, data privacy, security, risk, OMC use intention	Roger's innovation diffusion theory (IDT) and privacy calculus theory	Not discussed	387 respondents	PLS-SEM technique	SE, UP, CPV, perceived risk	SE, UP, **CPV, R**	OMC use intention
Gasparin et al., 2022	maximize the utility of a purchase, reduce choice uncertainty or regret, and/or satisfy curiosity about a purchase and pre-purchase information search behavior, repurchase intention, word of mouth	Customer journey model	Post-decision information search (PDIS)	359 and 238 participants in the first and second wave, respectively	PLS-SEM using the SmartPLS 3.0 software	Perceived Control, awareness, perceived risk	Cont, A, R	Repurchase intentions

Haridasan et al., 2021	Product fit uncertainty, purchase involvement, external information search, alternatives attractiveness, multichannel self-efficacy, switching costs, cross-channel switching intention	Uncertainty reduction theory	Not discussed	456 respondents	The proposed relationships were tested using two-stage structural model with AMOS 22.0	Convenience, perceived control, awareness, CPV	C, **Cont, A, CPV**	Loyalty
Swoboda & Fränzel, 2022	Omnichannel retailer quality, Online shopping experience, pre-purchase, purchase	Accessibility-diagnosticity theory	Pre-purchase integration includes, e.g., the provision of information, services, or promotion, regarding stage-specific behaviors like need recognition, information search or evaluation, while purchase integration includes, e.g., transaction or product information, order fulfillment, or services, regarding stage-specific behaviors like identifying alternatives, choice and ordering, re-purchase - information (depending upon its accessibility and relative diagnosticity)	394 shoppers	Sequential mediation modeling with longitudinal data is applied using Mplus 8, as is LMS for latent interaction effects, i.e., steady moderated mediation with conditional effects	Seamless Experience	SE	Purchase

Min Zhang et al., 2020.	psychological distance and perceived uncertainty, purchase intention	Construal level theory	Live video streaming	79 participants	Model 4 of the PROCESS macro	Perceived Risk	R	Purchase intention
Kasilingam & Krishna, 2022	Convenience, intention to uee and willingness to pay premium	TRA, theories on value dimensions, Sheth–Newman–Gross model or the Theory of Consumption Values (TCV), IDT, TPB, Value-based Adoption Model and Unified Theory of Acceptance and Use of Technology	Not discussed	1623 respondents	SPSS 24.0 and SmartPLS 3.0 PLS-SEM, MGA algorithm of SmartPLS3.0.	Convenience	C	Intention to use, purchase
Wong & Haque, 2022.	Brand love, trust, purchase intention, word of mouth	The Brand Resonance Model, triangular theory of love	Website (visual appeal, and perceived enjoyment) and brand innovativeness	229 customers	PLS-SEM with SmartPLS version 3.3.3 was employed as it can examine latent variables without requiring strict normal distributions of data	Trust	T	Purchase intention

Min Zhang et al., 2018	Empowerment, trust, patronage intention	SOR	Integrated promotion (IP), and product & price	155 consumers	partial least squares (PLS) method implemented in Smart PLS 3.0	Perceived Control, trust	Cont, T	patronage intention
Cattapan & Pongsakornrungsilp, 2022.	perceived risk, customer satisfaction, purchase intention	SOR	integrated product and price, integrated promotion, integrated transaction information, integrated information access, integrated order fulfilment, and integrated customer service	400 respondents	three-stage data analysis was performed using SPSS 17.0 and AMOS 21.0; descriptive statistics, CFA, and SEM	Perceived Risk	R	Purchase intention
Junbin & Xinyu, 2022	channel control experience: perceived channel attribute familiarity, channel type matching, and cross-channel access convenience; consistent interactive experience: information crosschannel consistency and cross-	EDT, Consistency theory, self-efficacy theory, self-regulating attitude theory	Not discussed	210 and 342 respondents in stage 1 and 2, respectively	PLS SEM	Ubiquitous Personalization, convenience, SE	UP, C, SE	Omni-channel customer retention intention

	channel service support							
Levin et al., 2005	Product attribute,consumer attribute, shopping stage, shopping preference	Not specified	Not discussed	199 students, and 214 nationwide respondents	Regression analysis	Customer Perceived Value	CPV	Shopping preference
Lim, 2015	perceived value, social factors, perceived ease of use, perceived usefulness, entertainment gratification (EG), web irritation (WI), emotional state, and web atmospherics (WA)	theory of reasoned action (TRA), technology acceptance model (TAM), and uses and gratifications theory (UandG)	Entertainment gratification, web irritation	320 e-shoppers	SEM	CPV, SE, trust, convenience	CPV, SE**, T, C**	e-shopping intention

Pham & Ahammad, 2017	Product information, Ease of use, security assurance, customization, website appearance, order fulfilment, ease of return, ease of check out, customer satisfaction,	Procedural justice theory,	Responsiveness to customer satisfaction, Order fulfilment,	600 students	multi-group analysis method in AMOS 16	Awareness, convenience, UP	A, C, UP	Repurchase intention, purchase
Sullivan & Kim, 2018.	Perceived value, perceived risk, online trust, perceived usefulness, repurchase intention	Not specified	Website Reputation	312 participants	PLS-SEM	CPV, perceived risk, trust	CPV, R**, T**	Repurchase intention
Close & Kukar-Kinney, 2010	utilitarian and hedonic motivations, frequency of consumers' online cart use	Not specified	Not discussed	247 online shoppers	SEM	Awareness	A	Purchase intent, use, purchase
J. H. Kim et al., 2009	Convenience, information, web appearance, communication, entertainment value, customization, e-satisfaction, e-loyalty	SERVQUAL	Web appearance, communication	366 students	SEM	Convenience, awareness, UP	C, **A, UP**	e-Loyalty

Teo & Liu, 2007	trust, perceived risk	Not specified	Characteristics of e-commerce vendors (perceived reputation, perceived size, MCI, system assurance), Characteristic of consumer (propensity to trust)	544 (US), 1381 (Singapore), and 988 (China) respondents	SEM was conducted using AMOS 4.	Trust, perceived risk	T, **R**	Purchase
Vlachos & Vrechopoulos, 2008.	seven service quality determinants, service evaluation constructs and behavioral intentions	TRA	Seven service quality determinants are .Interaction Quality, Content Quality, Device Quality, Privacy, Connection Quality, Contextual Quality, and Customer Service	144 respondents	PLS-SEM	CPV	CPV	Buying intention
Fiore et al., 2005.	Experiential value, attitude towards online retailer, willingness to purchase, willingness to patronize	Not specified	Image interactivity technology (IIT)	206 subjects	SEM	Seamless Experience	SE	Willingness to purchase, willingness to patronize
J. Kim & Lennon, 2013	Emotion and perceived risk	Not specified	Website quality (Website design, fulfillment / reliability, customer service, security/privacy) and reputation	219 students	Structural equation modeling (SEM)	Perceived Risk	R	purchase intention

A et al., 2005	perceived value	Not specified	Efficiency, System Availability, Fulfillment, and Privacy	549 respondents	CFA/EFA	CPV	CPV	Intention , Loyalty
Adapa et al., 2020.	perceived complexity, perceived advantage, perceived novelty and perceived risk of using smart retail technologies, intention to use, loyalty	Sensory marketing and Dual Coding Theory, expectation–confirmation theory (ECT)	Smart Retail Technologies as one of the OMC capabilities	338 respondents	SEM	Perceived Risk, CPV	R, CPV	Loyalty, Intention t to use
Omoregie et al., 2019	satisfaction, service quality, trust, value, loyalty	Not specified	Not discussed	565 customers	PLS–SEM using SmartPLS version 3.	Trust, CPV	T, **CPV**	Loyalty

Martin et al., 2015	Challenge, Telepresence, cognitive experiential state, ease of use, customization, connectedness, perceived control, aesthetics, perceived benefits, affective experiential state, trust, perceived risk, online shopping satisfaction, Online Re-purchase Intention	Not specified	Challenge, Telepresence, ease of use, customization, connectedness, aesthetics	392 and 180 responses from frequent and infrequent shoppers group, respectively	SmartPLS SEM	Convenience, UP, perceived control, CPV, SE, trust, risk	C, UP, **Cont, CPV, SE, T, R**	Online Re-purchase Intention
Yoo & Park, 2016	perceived value, satisfaction	Self-congruity theory	e-mass customization	online survey in Korea for luxury products	Single group structural equation modeling was used	Perceived Control	Cont	Loyalty
Pagani et al., 2019	PRIVACY= Privacy Concerns, perceived risk, trust	Sensory marketing and Dual Coding Theory	Nature of the platform interaction; touch versus combined touch and voice	95 students	PLS-SEM	Perceived Risk	R	Trust

Li et al., 2018	online channel media richness, information privacy concern, deception, online loyalty	Media richness theory (MRT)	Not discussed	258 respondents	SPSS 19.0	Perceived Risk	R	Loyalty
Falk et al., 2007	Offline channel satisfaction, Perceived usefulness, Perceived risk, Trust in the service provider, intention to use	Status Quo Bias Theory	Not discussed	639 customers	SEM - AMOS 5.0	CPV, perceived risk, trust	CPV, R, **T**	Intention to use
Rose et al., 2012.	e cognitive and affective components of OCE	Not specified	Shopping website: interactivity speed, telepresence, challenges, connectedness, aesthetic	220 online shoppers	PLS-SEM	SE, perceived control, CPV, trust	SE, Cont, **CPV, T**	Online Repurch ase Intenon
Ryu & Fortenberry, 2021	Performance Expectancy (PE), effort expectancy (EE), attitude (ATT), omnichannel shopping intention (INT)	UTAUT, TPB	Not discussed	470 consumers	SEM	Convenience	C	Intention

Hossain et al., 2020	Channel service configuration (breadth of channel choice, transparency of channels, appropriatness of channels),, content consistency (information consistency, transaction data integration), process consistency (system and image consistency), assurance quality (privacy, security, service recovery accessibility), cross buying intention	Dynamic capabilities theory	Channel service configuration (breadth of channel choice, transparency of channels, appropriatness of channels), content consistency (information consistency, transaction data integration), process consistency (system and image consistency), assurance quality (privacy, security, service recovery accessibility)	301 customers	PLS-SEM	CPV	CPV	Cross buying intention
Hahn & Kim, 2009	Trust, perceived internet confidence, online search and offline behaviour intention	Not specified	Not discussed	261 students	SEM	Trust	T	Online search and offline behaviour intention

Q. Chen et al., 2005	multi-channel interactivity, product evaluation, trust, online purchase, offline purchase	Not specified	Interactivity	100 students	General	Trust	T	Online and in-store purchase intention
Gan & Wang, 2017	utilitarian value, hedonic value and social value, and perceived risk, purchase intention	Not specified	Not discussed	277 respondents	PLS-SEM	Perceived Risk	R	Purchase intention
M. Frasquet et al., 2017.	Brand trust, brand attachment, offline loyalty	Cognitive dissonance theory	Interaction between offline and online channels	Online survey answered by 761 multichannel apparel shoppers in two countries (UK and Spain)	SEM	Customer Perceived Value	CPV	Loyalty
Azad, 2023	consumer's service experience consciousness, continuance intention, eWOM	Not specified		219 participants who shop from multi-channel grocery shops	SEM - AMOS	Seamless Experience	SE	Continuance Intention

Qin et al., 2023	live streaming (Sense of community, interactivity, emotional support) and online consumer reviews (OCRs) (Perceived usefulness, and perceived trust), purchase intention	Channel complementarity theory	Live streaming and customer reviews	448 customers	SEM	Customer Perceived Value	CPV	Purchase intention
Stocchi et al., 2019	perceived usefulness, privacy concern, ease of use, intention to use the App, willingness to pay for the App, word of mouth	TAM	Branded app (Privacy, security, design characteristics, Ubiquity app compatibility)	335 consumers	SEM	CPV, perceived risk	CPV, R	Intention to use the App, willingness to pay for the App
Mengyao Zhang et al., 2023	performance expectancy, effort expectancy, social influence, facilitating conditions, perceived risk, purchase intention and behaviour	UTAUT and perceived risk theory	Online Community Group Buying Platform	280 online consumers who had experience in online community group buying	Regression analysis using SPSS 25.0	Convenience	C	Purchase intention and behaviour
Chai & Wang, 2022	Perceived usefulness, sustained usage intention	TAM	channel service transparency, channel choice breadth, content consistency, and process consistency	284 consumers having BOPS experience	PLS-SEM	Customer Perceived Value	CPV	Sustainable Usage Intention

Rippé et al., 2016	Perceived control	TPB	Adaptive selling (AS)	387 students	Covariance-based SEM - IBM SPSS AMOS 22.0.0.0	Perceived Control	Cont	Purchase intention
Shankar, 2021	convenience, perceived hedonic values, perceived utilitarian values, consumers' perceived security concerns	Not specified	Webrooming	534 banking users	Covariance-based SEM and PROCESS macro	Convenience	C	Webrooming Intention
E. Kim, 2021	benefits (perceived usefulness and perceived enjoyment) and costs (perceived complexity and perceived privacy risk), intention to search for information and use LBS	Behavioral decision theory, cognitive evaluation theory, diffusion-of-Innovations theory, flow theory	Location-based retail (LBS) apps	385 respondents	PLS-SEM	CPV, perceived risk	CPV, R	Intention to search for information and use LBS
Indiani & Febriandari, 2021	Perceived benefits, risk, online purchase intention, actual purchase	TPB, perceived risk theory, TAM		450 consumers	PLS-SEM	CPV, perceived risk	CPV, R	Online purchase intention, actual purchase

Mosquera et al., 2018	Effort expectancy, use intention, and behaviour	UTAUT2	Smartphone usage	1043 customers	SEM	Convenience	C	use intention, and behaviour
L. W. Wu et al., 2021	multichannel integration and perceived affordances, online satisfaction, offline & online loyalty	Not specified	Multichannel integration, Perceived affordances	387 customers of certain multichannel retailers.	SEM	Seamless Experience	SE	Online / offline loyalty
L. W. Wu & Tang, 2022	trust in retailers, trust in mobile payment, loyalty to retailers and loyalty to mobile payment as well as the antecedents of trust in retailers and trust in mobile payment.	Trust transfer theory, SOR model	Mobile payment, mobile apps,	358 mobile payment user during shopping process	SEM that involves LISREL and SPSS process	Trust	T	Loyalty to retailer and mobile payment

Yang et al., 2023	Personal innovativeness, service quality, perceived risk, and trust	UTAUT original framework and UTAUT 2		420 shoppers	Multi-analytic approach, such as SEM and artificial neural networks (SEM-ANN).	Trust, perceived risk, CPV	T, R, CPV	Shopping intention & behaviour
J. F. Wu & Chang, 2016	Online convenience, online purchase intention	Theory of cognitive dissonance, Group entitativity theory	Transparency of service configuration, Information consistency, Business ties, Process consistency	390 multichannel shoppers	SEM	Convenience	C	Online purchase intention
Hamouda, 2019	PV, satisfaction, loyalty	Not specified	Quality of MC integration	395 bank customers.	SEM	Customer Perceived Value	CPV	Loyalty
Mishra et al., 2022	consumer empowerment and satisfaction	Consumer empowerment theory	Information & promotion integration, BOPS, post-purchase service integration, inventory status	336 young consumers having experienced omnichannel retailing	SPSS PROCESS macro	Seamless Experience	SE	Consumer patronage intention

K. Kim et al., 2020	1. Performance expectancy, 2. E ort expectancy, 3. Social influence, 4. Compatibility with BOPIS shopping, 5. Hedonic motivation, 6. Price value. 7. Trust,	UTAUT2	Buy-Online-Pick-Up-In-Store Service	358 consumers who had experience using BOPIS at least once	SEM	Convenience	C	Behavio ural intention and use
Geng & Chang, 2022	Convenience	UTAUT2, TPB	Quality, monetory savings	382 omnichanne l consumers.	PLS-SEM	Convenience	C	Continua nce intention

Qing, 2022	Customer satisfaction, perceived risk, perceived value of added services, perceived convenience, perceived quality, perceived personalization	TRA, TPB		250 respondents	SPSS	Convenience	C	Customer Purchase Decision
Chaudhary et al., 2022	Perceived usefulness, perceived ease of use, continuance intention, actual use	Not specified		302 respondents	SEM	Customer Perceived Value	CPV	Continuance intention, actual use
Song & Jo, 2023	Perceived ease of use, perceived usefulness, relative advantge, percveived risk, continuation intention	TAM, behavior theory, TPB	Accesibility, monetary savings, transactional efficiency	262 respondents	PLS-SEM	Convenience, CPV, perceived risk	C, CPV**, R**	Continuance intention

Elareshi et al., 2023	perceived the ease of use and perceived usefulness	TAM	social media marketing (SMM) [social media features, electronic word of mouth, informativeness]	329 respondents through online banking services	SEM	Convenience, CPV	C, CPV	Behavioral intention, customer loyalty
Chi et al., 2023	consumer internal states (perceived performance risk, perceived financial risk, perceived social risk, perceived utilitarian value, and perceived hedonic value)	SOR	Product variety, information quality, style conformity, and service quality	379 respondents	Multiple regression tests	Perceived Risk	R	Purchase intention
Mukherjee & Chatterjee, 2021	Satisfaction with information online vs offline, variety seeking behavior, perceived risk online over offline, convenience online vs offline,satisfaction with information online vs offline	Consumer purchase decision-making theories	webrooming and showrooming	243 respondents	SEM	SE, perceived control, perceived risk, convenience	SE, Cont, R, C	Intention to search and buy online vs offline

Herrero-Crespo et al., 2022	Webrooming or showrooming	TAM	webrooming and showrooming	462 respondents	SEM	Customer Perceived Value, convenience	CPV, C, T	Behavioural intention (webrooming & showrooming)
Kang, 2019	Perceived value of showrooming and webrooming	Not specified	individual characteristics of Personality, Information, Brand prestige, and Practicality-based fashion lifestyle	601 SoLoMo consumers	SEM	Perceived Control	Cont	Omnichannel shopping & Product review sharing intention
Jo, 2023	channel accessibility, perceived multichannel quality, relative advantage and customization, recommendation intention, loyalty	TAM	Online for Offline (O4O) context	205 respondents	PLS-SEM	Convenience, UP, CPV, convenience	C, UP, CPV**, C**	Recommendation intention, loyalty

3.5.2. Meta-analysis

Meta-analysis is a research methodology that was developed based on Fisher's "combining p values" technique. It offers an alternative to qualitative and descriptive literature analysis. The approach enables researchers to quantitatively examine and integrate the findings of various investigations (Jeyaraj, 2020). It has become popular as a good tool for critically assessing and statistically combining study findings from several studies (Floyd *et al.*, 2014). Moreover, it enables a mathematical integration of correlations among two or more variables to resolve contradictory results *(*Hong *et al.*, 2017). A trial version of the comprehensive meta-analysis program (www.meta-analysis.com/) was utilized to conduct the meta-analysis, since it is widely favored by researchers.

In order to do the meta-analysis, the effect sizes were retrieved from the studies that were included. The effect size is defined as "the magnitude of the phenomenon's presence in the population or the extent to which the null hypothesis is incorrect" (Cohen, 2013). In this study, we employed the correlation coefficient r as the measure of impact magnitude. The meta-analysis comprises the subsequent procedures. The initial stage involves computing the Fisher's Z and merging the effect sizes. The second stage involves assessing the statistical significance of the total effect sizes. The p-value corresponding to the aggregate effect size indicates its statistical significance (Hong *et al*., 2017). Due to the rejection of the homogeneity assumption across trials, as indicated by the Q-statistics finding (C. M. Martin, 2008), this study decided to use a random effect model for meta-analysis.

The complete meta-analysis program calculates the cumulative correlation coefficient [Avg(r)], effect sizes [p(ES)], Z-value, and 95% confidence interval levels by analyzing the correlation coefficients between each pair of variables and

the sample size. Consistent with prior meta-analytic research (Dwivedi *et al.*, 2019), the variables for the present study were chosen based on the requirement that the connections between the independent and dependent constructs had been examined in at least three or more previous studies utilizing distinct data sets (Kirca *et al.*, 2005). The constraint was implemented in order to acquire correlation coefficients that are suitable.

3.6. Results

Figure 3.2: Number of Articles by Decade

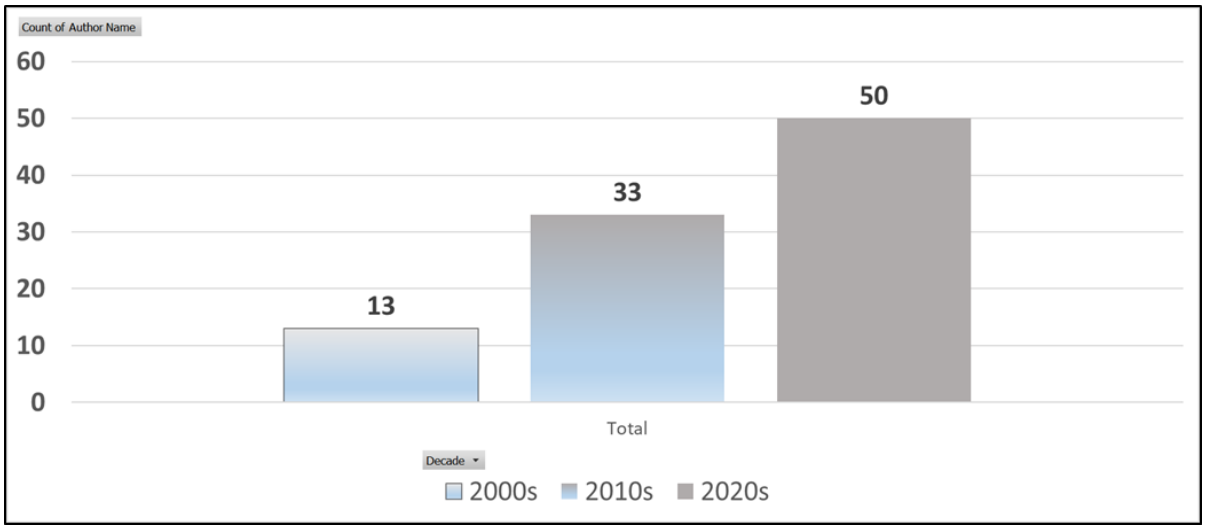


Figure 3.2, 3.3, 3.4, and 3.5 displays the distribution of publications and effect sizes categorized by decade and kind of CPV variables. There has been a growing interest in investigating the customer perceived value (CPV) of the customer decision outcome (CDO) in the context of omnichannel. This interest has notably intensified in the past two decades. Furthermore, the focus on certain CPV components changed over time. The concepts of ubiquitous customization, seamless experience, and convenience have become increasingly popular in the 2020s. This is evident from the considerable increase in the number of literary publications within a short

period of 34 months, compared to 120 months in prior decades. The level of convenience decreased throughout the 2010s but has significantly improved during the 2020s. The level of interest in investigating CPV, as well as trust and awareness, has experienced a considerable decline. The concept of perceived control emerged in the 2010s, and there has been a notable rise in attention.

Figure 3.3: Number of Effect Sizes by Decade

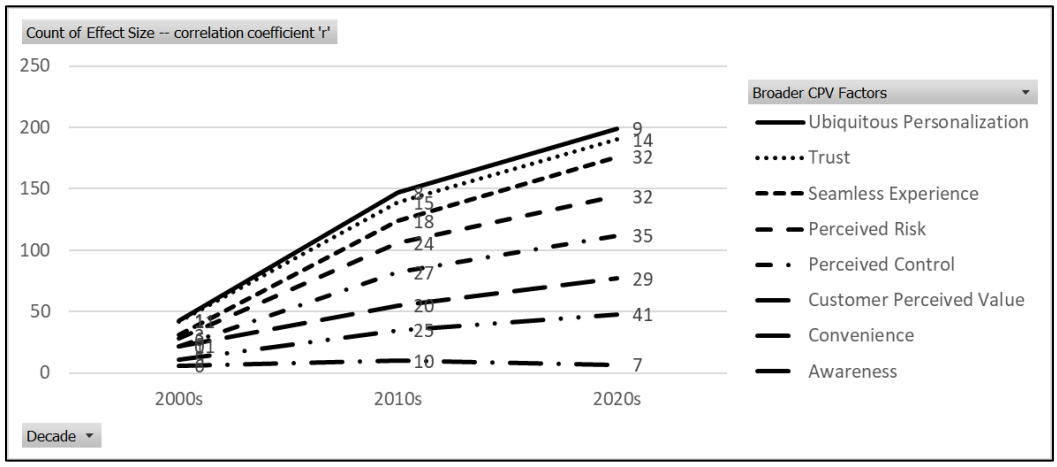


Figure 3.4: Distribution of Effect Sizes by CPV factors and by decade

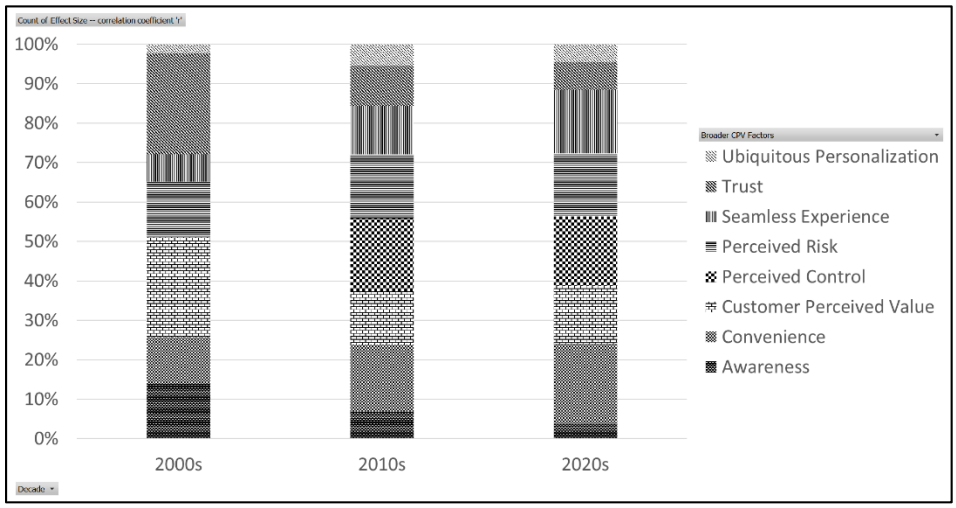
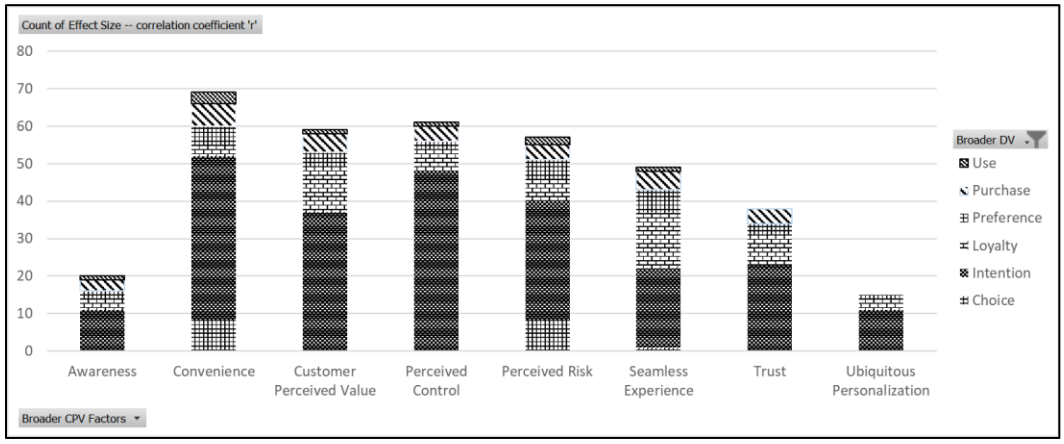


Figure 3.5 displays the distribution of the count of effect sizes for each CPV component across different dimensions of CDO. This demonstrates that all of these elements have an influence on every component of CDO, with the exception of choice, which is only affected by ease, perceived risk, and seamless experience. Similarly, the use of anything is influenced by everything except trust and widespread customisation. Primarily, all the parameters related to cost per visit (CPV) have an influence on intention.

Figure 3.5: Distribution of number of articles by CPV factors to various related CDOs



The meta-analysis results (Table-IV) demonstrate that all eight predicted correlations were determined to be statistically significant. The hypothesis on the relationship between variables of CPV and CDO have been confirmed. Table IV contains data points and the number of investigations for each component of CPV. There are a total of twenty-eight studies and sixty-two data points available for the variable 'Risk'. Data points refer to the cumulative effect sizes derived by combining the effect sizes of many variables that have distinct labels but share a

similar meaning. These variables are grouped together under a single construct of interest. In the study conducted by Aw (2019), four characteristics (labels) are categorized as 'convenience'. The factors in question include anticipated price depreciation, prompt acquisition, buying endeavor, and shopping effectiveness. Thus, despite the research having a sample size of just one, there were four data points available for analyzing the effect size of 'convenience', and all of them were included in the analysis. Previously, we have reviewed in detail the specific information on the several 'variables' (labels) that are combined to create a single 'construct or factors of CPV'.

The results of meta-analysis (Table 3.5) indicate that all the eight hypothesized relationships were found to be significant. All the hypotheses, the relationship between factors of CPV and CDO, has been found to be supported. Table-3.4 comprise of the information on data points and number of studies for each factors of CPV. For example, twenty-eight studies and sixty-two data points are available for ‘Risk’. Data points is a total effect sizes obtained by aggregating effect sizes of all the variables with different label names but has a similar meaning and hence clubbed under the single construct of interest. For example, in the study done by Aw (2019), there are four variables (labels) that are clubbed as ‘convenience’. These variables (labels) are expected price loss, immediate possession, purchase effort, and shopping efficiency. Therefore, for measuring effect size of ‘convenience’, though the study is ‘1’, data points are ‘4’ and all were considered for analysis. Details information on the various ‘variables’ (labels) that are clubbed together to form a single ‘construct or factors of CPV’ has been discussed earlier

Table 3.5: Meta-analysis result

S/n	Factors	Studies	Data Points	Sample size	Avg (r)	Z-value	p(ES)	95% L(r)	95% H(r)	Q-statistic	I^2	Tau^2	Fail-safe N using Rosenthal approach
1	Awareness	10	22	21,840	0.303	6.472	0.000	0.215	0.387	898.914	0.980	0.051	5493.000
2	Risk	28	62	30,613	-0.093	-2.156	0.031	-0.176	-0.009	3414.477	0.980	0.113	1605.000
3	Convenience	35	72	47,292	0.430	12.712	0.000	0.370	0.486	4159.052	0.980	0.090	5363.000
4	Trust	23	35	14,444	0.431	11.826	0.000	-0.018	0.491	764.548	0.950	0.054	6879.000
5	Control	17	58	26,340	0.428	10.867	0.000	0.358	0.493	2350.590	0.980	0.098	4292.000
6	UP	11	18	13,628	0.434	13.786	0.000	0.378	0.487	230.526	0.930	0.018	1236.000
7	SE	26	54	23,376	0.460	8.977	0.000	0.370	0.541	3565.207	0.990	0.156	3778.000
8	CPV	33	54	21,453	0.583	16.673	0.000	0.529	0.633	2034.797	0.970	0.308	0360.000

Note: All Q-statistics are statistically significant, suggesting significant heterogeneity associated with each relationship. The I^2 statistics further indicate that the majority of variations across studies are due to heterogeneity instead of chance.

The fail-safe sample sizes for all relationships exceeded the tolerance threshold, indicating minor worry over the file drawer bias (Rosenthal, 1991). In the following discussion, we adhere to the guideline established by Lipsey and Wilson (2001) for categorizing correlation effect sizes as small ($r \leq 0.10$), medium ($0.10 < r < 0.40$), and big ($r \geq 0.40$). The Q-statistic was significant for all these parameters of CPVs. The I^2 statistic indicates that the majority of the differences in effect sizes among studies may be attributed to heterogeneity.

A significant association was observed between CDO and CPV in the CCI environment, with a correlation coefficient of 0.583. Positive and high correlations were observed between CDO and SE (r=0.460), UP (r=0.434), trust (r=0.431), convenience (r=0.430), and control (r=0.428). The correlation between CDO and awareness was positive and moderate (r=0.303), whereas the correlation between CDO and risk was weak and negative (r= -0.093). Our study indicates that the cumulative probability of victory (CPV) has the greatest influence on the cumulative distribution of outcomes (CDO), with an impact of 18.4%. This impact is 27% more than the impact of the CPV factor (standard error of 15.5%), which has the second biggest influence. The impact of user perception (UP), trust, control, and convenience ranges from 13.6% to 13.7%, with higher values indicating a greater influence. The danger has the lowest impact, with a negative 2.9%. The awareness has a 9.6% impact.

3.6.1. Customer perceived value

The findings demonstrated that CPV has a significant impact on CDO in CCI, hence supporting hypothesis H1. There are a total of thirty-three studies that are eligible for consideration in this study. Out of these, fifty-four specific data points were selected for analysis. The sample size for these data points is 21,453. The link is statistically significant ($p<0.005$) with an average effect size of 0.583. This is

corroborated by several previous investigations, such as Jo, 2023, Elareshi et al., 2023, Chaudhary et al., 2022.

3.6.2. Awareness

The findings indicated that awareness had an impact on CDO in CCI, therefore supporting hypothesis H2. There are ten potential studies that might be included in the analysis. These studies provide a total of twenty-two data points, with a combined sample size of 21,840. The link is statistically significant ($p<0.005$) with an average effect size of 0.303. This is corroborated by other previous research, such as Abbasi et al., 2023; Pham and Ahammad, 2017.

3.6.3. Risk

The findings indicated a substantial negative relationship between risk perception and CDO, hence supporting hypothesis H3. There are a total of twenty-eight studies that are eligible for inclusion in the study. Out of these, sixty-two data points were analyzed, with a sample size of 30,613 participants, specifically focusing on risk perception. The association between risk perception and CDO is statistically significant ($p<0.05$), with an average impact size of -0.093. Based on this discovery, consumers are more inclined to see firms with higher CCI skills as less dangerous in comparison to those with lower capabilities. The consumer's risk idea arises from several factors, such as the risk of unavailability in a certain distribution channel. It can also be associated with the postponement of getting goods or services (Bendoly et al., 2005); the uncertainty and negative outcomes of participating in an activity (Dowling and Staelin, 1994); financial and social risks (T. Chi et al., 2023).

Moreover, the way consumers perceive risk has a substantial influence on their purchasing behavior (Sheth and Parvatiyar, 1995), their attitude towards shopping

(Jarvenpaa and Toad, 1996), and whether they include or exclude the search and assessment stage in the overall buy decision process (Griffin and Hauser, 1993).

3.6.4. Convenience

The meta-analysis results indicated that convenience yielded statistically significant outcomes. The study validated the hypothesis that convenience is positively related to CDO. There are a total of thirty-five studies that are eligible for consideration in this study. Out of these, seventy-two specific data points were selected for analysis. The sample size used for convenience in this study is 47,292. The association between convenience and CDO is statistically significant ($p<0.005$), with an average impact value of 0.430.

Convenience refers to the capacity to minimize the non-financial expenses (such as time, energy, space, and effort) that consumers face when buying or using products and services at every stage of the decision-making process, including decision, access, transaction, benefit, post-benefit convenience, and search and comparison convenience (Berry *et al.*, 2002; Seiders *et al.*, 2007). This suggests that consumers are more likely to choose an organization that provides convenience across their whole purchasing process, as they aim to minimize these three-dimensional losses.

3.6.5. Trust

The meta-analysis results indicated that trust fared well. The study demonstrated a substantial relationship between trust and CDO in an OMC setting, with H5 hypothesis verified. There are a total of twenty-three studies that are eligible for consideration in this study. Out of these, thirty-five specific data points were analyzed, with a sample size of 14,444 participants focusing on the aspect of trust. The association between trust and CDO is statistically significant, with an average effect size of 0.431 ($p<0.005$).

3.6.6. Control

The perceived control component has a positive relationship with the CDO, which supports hypothesis 6 (H6). There are a total of seventeen studies that are being evaluated for this study. Out of these, fifty-eight data points have been taken into account. The sample size for the control group is 26,340. The association between control and CDO is statistically significant, with an average effect size of 0.428 ($p<0.005$).

Enhanced sense of control empowers customers with greater flexibility and freedom throughout their purchasing process, leading to a heightened feeling of value and thus increasing their preference. It is anticipated that enhancing perceptions of control in service contexts would lead to favorable evaluations of service value (Bateson, 2000).

3.6.7. Seamless experience

The meta-analysis results indicated a substantial and positive relationship between the Seamless experience component of customer perceived value and customer decision outcome, providing support for H7. The findings can be attributed to the phenomenon where customers initiate their purchase process on one channel and finish it on another, after transitioning between multiple channels. This leads to a seamless experience that enhances convenience and involvement, while also guaranteeing a consistent brand encounter (Eaglen, 2013).

3.6.8. Ubiquitous personalization

The meta-analysis results indicate a positive correlation between the ubiquitous personalization element of customer perceived value and the customer decision outcome, providing support for hypothesis H8. Eleven research are available for consideration in this analysis, with a total of eighteen data points. The sample size

for the study is 11,628 for ubiquitous personalization. The link between ubiquitous personalization and customer decision outcome is statistically significant with an average effect size of 0.434 ($p<0.005$).

3.7. Discussion

Which particular areas should retailers and brands focus on to increase the perceived value they offer, with the goal of influencing customer behavior and favorably impacting their decision-making process within each stage? In order to address this inquiry, we performed a meta-analysis of studies on customer decision outcome, including the whole span of multi-channel integration, namely from its debut in 2003. The primary objective was to gain a deeper comprehension of the specific elements of omnichannel retail perceived value that influence the customer decision outcome perception of a retailer and its brands. Table 3.5 presents a concise overview of our primary research discoveries.

3.7.1. What specific areas should be prioritized in order to achieve a positive outcome in consumer decision-making?

Which approach do retailers and brands pursue to improve consumer decision outcomes? (a) being able to disseminate information, reduce information asymmetry, and enhance recognition about its products and services offerings (awareness), (b) enhance trustworthiness through benevolence, competency, integrity, and by securing private information (trust), (c) neutralizing risk likelihood and severity through transparency, and assurances, and ethics (risk), (d) facilitate customer with enhanced ease, freedom, speed, where time and effort sacrifices are reduced (convenience), (e) providing customer with an environment where she can feel in control during their purchase decision-making process (control), (f) establishes strong cooperation between its functional areas, processes, and capabilities such that customer have an unending, uninterrupted experience while

navigating through different channels (seamless experience), (g) provide customization so that customers can choose their channel combination that suits them (ubiquitous personalization), or (h) providing overall perceived value by incorporating all the above seven factors of CPV. Our findings indicate that all of the aforementioned factors are significant. As expected, the total CPV has the greatest impact on the CDO. The average impact of it is 27% greater than seamless experience, and 92% more than awareness. Among the seven components of CPV, it was discovered that seamless experience had the most impact on the CDO, surpassing ubiquitous personalization, trust, convenience, and control in that sequence by 6 to 7.5%. The lowest level of effect was detected with awareness, which was 52%, lower than that of seamless experience. The lowest negative impact is noticed when there is a perceived risk, indicating that customers do not view CCI services as dangerous.

This study reinforces the necessity to enhance the seamless experience with the consumer. However, enhancing ubiquitous personalization, trust, convenience, and control shall yield similar outcome.

3.7.2. Theoretical Contributions

The results of our meta-analysis offer following five key observations on the factors contributing to CPV in the cross channel integration setting, leading to a customer decision outcome. These findings enable the application of generalizable analyses to the data obtained from research that have employed various approaches:

a. We offer a satisfactory amount of seven perceived value categories and total customer-perceived value (CPV) that are positively linked to customer delight and satisfaction (CDO). This contributes to the expansion of existing research in the areas of perceived value, organizational market conditions (OMC), and consumer behavior.

b. This meta-analysis allowed for the extraction of definitive findings across a range of product/service categories (such as financial services institutions, universities, apparel, automobiles, clothing, electronic products, and books, fashion, electronics, and automatic coffee machines); diverse contexts (including retail channels, service providers, e-tailers, and mobile apps); and various countries of study (including the U.S., South Africa, Spain, Mongolia, Malaysia, India, Germany, Finland, Sweden, China, Korea, and European countries). We categorized literature based on the channel paradigm attribute, distinguishing between multichannel and omnichannel approaches. We also examined the study emphasis area, which might be just on the channel, solely on the brand, or on both simultaneously. We also gathered data about the distribution channels utilized in the study, such as traditional brick-and-mortar stores, online platforms, catalogs, as well as developing channels like mobile applications and websites. The research retrieved the context, which encompasses retail (product), service, and other areas such as live streaming.
c. The essential information on the literature was retrieved, including omnichannel dimensions, core theory, analytical approach, and the amount and kind of samples utilized for empirical research.
d. The perceived value elements of awareness, danger, convenience, trust, control, social influence, and user preferences were determined by combining specific concepts with comparable definitions found in existing literature. The present study is unique in that, to the best of our knowledge, no meta-analysis is done to determine the determinants of CPV in CCI that have an influence on CDO.
e. This work combines earlier research and resolves conflicting data, providing a comprehensive understanding of the variables influencing CDO in CPV.

The meta-analytic evaluation identified the most influential factor of CPV in CCI environment, allowing for an examination of the strong correlations between the

factor and CDO. The study revealed a significant and high positive correlation between the CPV ($r = 0.583$, $p = 0.000$) and CDO. The results of this meta-analysis can serve as a reference for researchers in choosing constructs to analyze CPV. Meta-analysis results allow researchers to visually identify the areas where different studies agree or disagree. This can help guide the formulation and investigation of future research issues in a broader framework. This study contributes to the advancement of information on the impact of CPV in CCI environments and its influence on decision-making outcomes.

3.7.3. *Limitations*

The purpose of this research was to summarize the existing data from several empirical investigations on CPV in an OMC context. Nevertheless, it is important to acknowledge some constraints. Insufficient relevant data in published research on CPV was observed during the data gathering stage, limiting the possibility of doing a meta-analysis. Consequently, these studies were excluded from this investigation.

This study exclusively focused on quantitative studies while excluding qualitative studies. Hence, further investigations might use both categories of papers in the meta-analysis. The present work quantified the availability bias in order to ascertain the minimum number of inconsequential effects required to alter the significant relationships. Applying the methodology outlined by Hunter and Schmidt (2004), it was determined that a minimum of forty inconsequential effects is required.

The study did not include an examination of moderating variables since there were not enough studies on moderating effects related to the idea of multichannel, which has been around for over two decades.

Although there are limits, this study is the first to comprehensively examine aspects related to CPV. It offers a consolidated perspective on the elements that influence CDO in the CCI environment, contributing to the advancement of existing knowledge in this field.

3.7.4. Future research directions

The results of this meta-analysis study offer several opportunities for future investigation. Initially, we have recognized a distinct deficiency in the existing body of knowledge, specifically the absence of integration in the context of CPV in relation to CCI. Our meta-analysis will inspire academics to approach this issue with greater precision and productivity, therefore enhancing the present knowledge in this field. Furthermore, several particular problems have been discovered. Economic incentives are proven to be crucial in fostering CPV (customer-perceived value) in CCI (customer-centric industries). Nevertheless, it is important for future research to examine the long-term impact of economic incentives. Moreover, future research endeavors might explore other variables pertaining to individual circumstances. Attitude is a significant determinant of persons' behavior, as stated by the theory of planned behavior. Therefore, future research might explore the impact of CPV variables on attitudes towards CDO in CCI scenarios.

Our meta-analysis incorporates the correlation coefficient as the impact magnitude, using a specific approach. In future research, it would be beneficial to examine the unstandardized coefficient and/or route coefficient to better comprehend the influence of these factors on customer-perceived value (CPV) in the context of customer decision-making orientation (CDO) within the customer-company interaction (CCI).

We analyzed this meta-analysis from a demand-side perspective in the context of CCI to gain a better understanding of CDO. Future research can use a supply-side perspective when examining the context of the CCI (Customer-Centric Innovation) in order to get insight into its effects on organizational profitability, sales, and other related factors. Our study includes the primary variables of CPV. Subsequent research can discover other variables beyond the primary ones that contribute to CPV, which are connected to the components found in this study. Therefore, the meta-analysis may be performed on this model structure that includes second-order and tertiary-order components in order to provide valuable information on the multi-level model of CPV.

We have implemented either the Customer Centric Initiative (CCI) or the Organizational Membership Commitment (OMC) as a strategic method to cultivate loyalty and preference among customers. In future research, it would be beneficial to combine this idea with the 'Service-Profit Chain' model and undertake a meta-analysis to explore the many types of resources that a firm may utilize to optimize its profits as it transitions from a multi-channel to an OMC organization.

Chapter Four

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4.1. Introduction

A theoretical framework is constructed based on the findings of the literature review for this thesis. This thesis consists of the study that focus on the degree of cross-channel integration service provided by a manufacturer-sponsor for consumer brands. This level is referred to as the manufacturer-sponsor consumer brand omnichannel transformation phase. The model in study focuses on the Brand Omni channel transformational phase or cross-channel integration service level and its value perception factors of the consumer experiencing these brands, and, in turn, will illustrate the influential role of these factors of the perceived value on brand preference and loyalty.

This chapter is structured into three sections that cover the various aspects of th study. The first section focuses on the theoretical background, the second section covers the development of the model and the research hypotheses, and the final section presents the chapter's conclusions.

4.2. Theoretical background – four pathways

We provided conceptualization through four pathways, which is described in the following sections:

4.2.1. Experience-based brand preference through competitive advantage (CA)

Tom Knighton stated that the customer experience is the new competitive battleground (Pine and Gilmore, 1998) and it is where business is going to be won or lost. The above perspective further substantiate the body of literatures that posit “customer experience” as vital mechanism to attain sustained competitive advantage (for example, (Shaw & Ivens, 2003). This implies that to have edge over competition, brands should acquire and develop capabilities for creating such

'experiences' for consumers and attain unique 'position of advantage' in the marketplace. Further, as discussed earlier, there is a broad consensus among scholars that 'experience' is a construct that customers perceive as core "value" because of the reason that customer value is derived from well-crafted customer experiences (Berry et al., 2002; Clairborne, 2004; Meyer and Schwager, 2007; Morgan and Rao, 2003; Schmitt, 2012). Furthermore, (Roehl and Hiroyuki, 1988) used "added value" to explain durable competitive advantages from a strategic perspective. When Jones and Morgan (1994) speak of "adding value", they are talking about the process of developing brands. Value is a foundation of a brand (Urde, 1997 & 2003). Figure 4.1 provides broad conceptual framework of experience-based customer preference.

Figure 4.1: Conceptual framework of experience-based customer brand preference

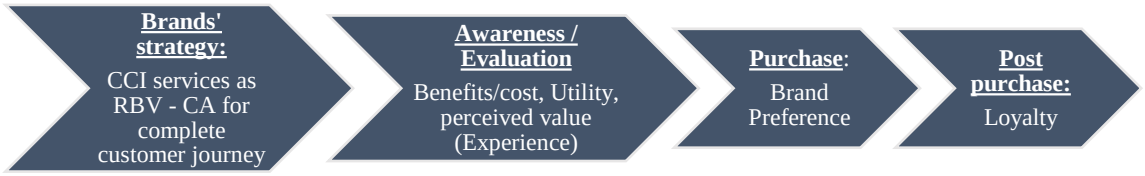
Figure 4.1 provides a framework with customer experience at the root cause of creation of competitive advantage from brand (supply-side) perspective. Customer experience, which is created by deployment of resources, leads to a perceived value when it comes to demand-side (customers') perspective. This value leads to the brand preference.

A body of literatures provides guidance on the effect of brand knowledge and brand experiences on brand preferences (R. S. Ebrahim, 2013); effect of perceived customer value on brand preference (Briliana and Andrianto, 2019; DAM, 2020; Hellier et al., 2003; Morton, 1994; Wang et al., 2015).

This shows how ‘customer experience’ has become vital criterion of assessment and comparison while customer makes a choice.

Contextualizing this framework to channel strategy of brands, we advance with cross channel integration service for complete customer journey as a resource-based competitive advantage (see Figure 4.2).

Figure 4.2: Conceptual framework of cross channel integration services as customer value proposition



A body of literatures agrees that in the given context customers’ brand preference decision adheres to a single criterion of ‘experience’ during their various touchpoints in their purchase journey with the brand (Briliana and Andrianto, 2019; DAM, 2020; Hellier et al., 2003; Morton, 1994; Wang et al., 2015). Customer assessment of “overall experience” during the entire purchase journey leads to the preference of a brand, which results in the loyalty for the brand.

Customer journey starts with awareness creation, arousal of interest and evaluation of the brand, still-used attention–interest–desire–action (AIDA) model and adaptations thereof (Lavidge and Steiner, 1961); (Court et al., 2009; Haan et al., 2013; Howard and Sheth, 1969; Li and Kannan, 2014; Vázquez et al., 2014), while they make their assessments of various brands while passing through the Top and Middle (ToFu/MoFu) of the funnel stages.

During evaluation or consideration stage, customers either assess benefits, for example, (Kuo et al., 2009; C. Lin et al., 2005) or utility (Baker et al., 2004; Bell et al., 1998; Bolton and Drew, 1991; Brady and Robertson, 1999; Chang and Wildt, 1994; Gould-Williams, 1999; Hartline and Jones, 1996; Hauser and Urban, 1986; Lapierre et al., 1999; Kerin, 1992; Tang and Xing, 2001; Vargo and Lusch, 2004; Zeithaml, 1988) or perceived value (for example, (Lapierre, 2000; Mathwick et al., 2001; Petrick, 2002; Sheth et al., 1991; Sweeney and Soutarh, 2001) through experience gained while transacting with the brand before making their preference (purchase) for the brand in the Bottom of the funnel (BoFu) stage.

This is then followed by retention stage of the customer which convert them into a brand loyalty based on their repeat preference.

We do not distinguish a brand's cross-channel integration capability based on the customers' purchase stage by assuming that the capability is 'consistent' all throughout these purchase cycle and as suggested by previous studies (e.g., Goersch, 2002; Pentina et al., 2009).

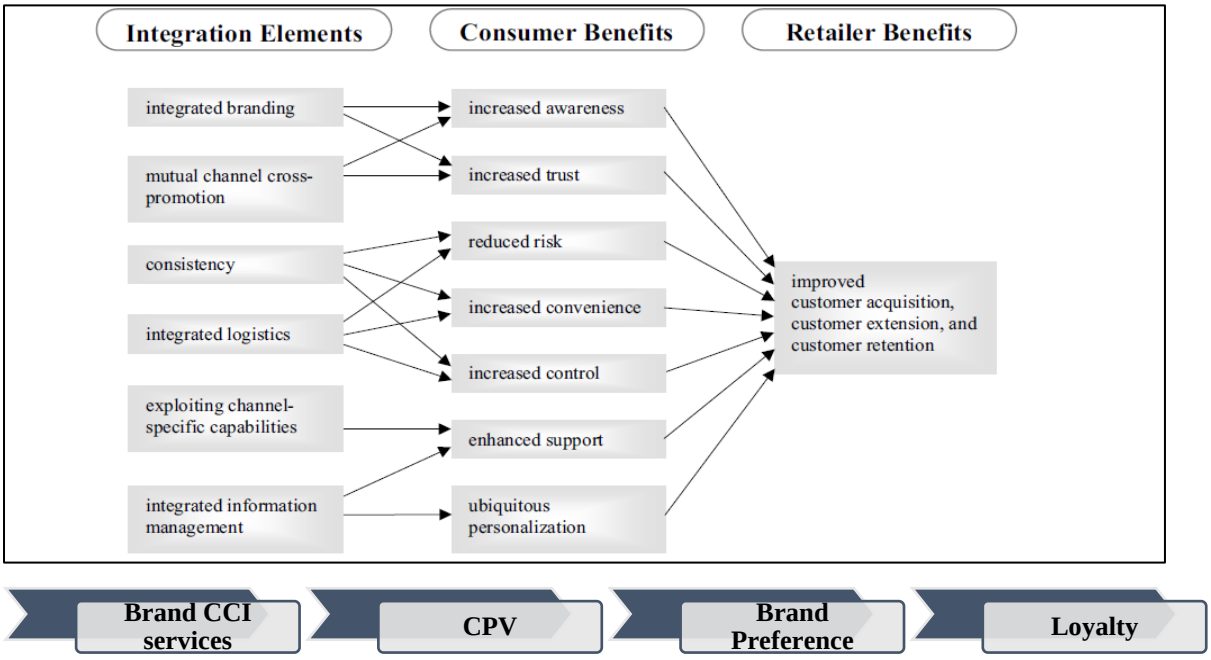
4.2.2. Extension of Goersch, 2002 conceptual framework

Previous studies offer guidance on the advantages of using integrated services across different channels in the context of omnichannel. These benefits include increased awareness (Yeğin and Ikram, 2022), convenience (E. Kim et al., 2017; Manuel Trenz et al., 2020), trust (Fernandes and Barfknecht, 2020), control (Jocevski et al., 2019), ubiquitous personalization (Hubert et al., 2020), and seamless experience (Mika Yrjölä et al., 2018). Perceived risk is a fundamental concept in the realm of information and communication technology (ICT) and, consequently, in OMC research. It refers to the non-monetary trade-offs that individuals are prepared to endure. This concept has received widespread recognition from scholars, including Xu et al. (2015). In 1999, Steinfield et al. were

the first to identify the presence of possible synergies between physical businesses and websites. MacMillan & McGrath (1997) demonstrated how the consumer consumption chain, their interpretation of the purchase and consumption process (PCP) framework, may be used to uncover sources of differentiation that go beyond the basic product. Goersch (2002) expanded upon these studies by recognizing the diverse advantages that customers may derive from the synergy between online and offline platforms, as well as the use of PCP for integrating channel services beyond only products. The benefits that have been discovered for customers include increased awareness, trust, convenience, control, personalized experiences everywhere, and improved support. Sacrifice was recognized as a factor influencing the perception of danger. In his study, Goersch (2002) concluded that the objective of multi-channel integration should be to deliver a superior customer experience that is both consistent and seamless across all channels. This includes the added value of providing customers with a seamless experience. This extended model of Goersch (2002) is depicted in the figure 4.3

In an omnichannel context, previous studies have identified CPV (customer perceived value) as a significant factor influencing consumer behavior, specifically the intention to purchase (Sullivan & Kim, 2018), and loyalty (Collin-Lachaud & Diallo, 2020). These studies have highlighted the importance of various elements of CPV, such as experiential value, (Kasilingam & Krishna, 2022), utilitarian value, hedonic value (Akel & Armağan, 2021), in shaping this relationship. Petrick (2004) highlights the need of analyzing different aspects of CPV in order to understand its correlation with consumer behavior variables like as preference and loyalty.

Figure 4.3: The extended Goersch's (2002) model



The numerous CPV dimensions must be consolidated into a certain specified set of dimensions. Since Keith's (1960) groundbreaking research, the notion of CPV has been thoroughly explored using many models, including those proposed by Sheth et al. (1991), Babin and Attaway (2000), PERVAL (J. C. Sweeney & Soutarh, 2001), and SERV-PERVAL (Petrick, 2002), among others. Prior meta-analytic studies on consumer behavior have classified consumer perceived value (CPV) based on existing ideas. Liu-Thompkins et al. (2022) categorized the factors that influence customer loyalty in retailing, specifically in the setting of CPV drivers, into cognitive, emotional, and social drivers. This classification was based on the work of Verhoef et al. (2009). In their study, Vieira et al. (2018) classified hedonic and utilitarian values by analyzing prior literature on consumer buying behavior. Various empirical studies have concentrated on individual advantages, but they

have not provided the entire understanding necessary to grasp CPV in the omnichannel environment. Implementing these models to inform the current investigation may provide challenges. Hence, in order to gain a deeper comprehension of CPV within this particular context, it is recommended to utilize the comprehensive framework proposed by Goersch (2002). This approach facilitates a holistic understanding of CPV in the omnichannel environment by taking into account all relevant elements from a broader perspective.

4.2.3. Experience and perceived value of the customer during their purchase journey with Omni channel brand

Customer experience refers to several aspects of a customer's thoughts, feelings, actions, senses, and social interactions in reaction to a company's products or services during the whole process of purchasing (Lemon & Verhoef, 2016). Tom Knighton stated that the customer experience is the new competitive battleground (Pine and Gilmore, 1998) and it is where business is going to be won or lost. This perspective substantiate the traditional body of literatures that posit "customer experience" as vital mechanism to attain sustained competitive advantage (for example, (Shaw & Ivens, 2003). Hence, to have an edge over competition, brands should acquire and develop capabilities for creating such 'experiences' for consumers and attain unique 'position of advantage' in the marketplace. Further, extant studies indicate that brand experience marketing is thriving faster than advertising, customer relationship management, personal relationship, and media, and is becoming more widely utilized as many marketers and companies have discovered that it engages a targeted audience (KR and Venkatesan, 2020). To extend the discussion further, we refer to the existence of a broad consensus among scholars about "experience as being a construct that customers perceive as a "core value" because customer value is derived from a well-crafted customer experiences (Schmitt, 2010). Value is referred to a foundation of a brand (Urde, 2003), and

‘adding value’ is referred to as a durable competitive advantages from a strategic perspective (Roehl and Hiroyuki, 1988), and process of a developing brands (Jones and Morgan, 2014).

Brand omnichannel transformational through a channel-integrated services ensures a seamless buying experience (Trenz et al., 2020) and ensures customers perceive it as value (e.g., Huré et al., 2017; Kumar dnd Reinartz, 2016; Leroi-Werelds et al., 2014), by strengthening its customer value proposition (Gallino and Moreno, 2014), and creation of value for customers (Iftikhar and Helfert, 2019; Kim et al., 2019; Rintamäki et al., 2007) by enhancing benefits and reducing sacrifices through building competencies and resources (R. J. H. Wang et al., 2015) that give organizations an edge over competitors.

Consistent with the prior research (Howard and Sheth, 1969; Neslin, Grewal, et al., 2006; Puccinelli et al., 2009), customer experience is conceptualized in three overall stages of a customer purchase journey: pre-purchase, purchase, and post-purchase (Lemon & Verhoef, 2016). Customer journey starts with “awareness creation”, which is followed by the “arousal of interest” and “evaluation” of the brand, when brands are accessed while passing through the “Top/Middle of the funnel” stages (e.g., Miklošík, 2015). During “evaluation” or “consideration” stage, customers either assess benefits, (e.g., Kuo et al., 2009) or utility, (e.g., Baker et al., 2004) or perceived value, (e.g., Sweeney & Soutarh, 2001) through experience gained while transacting with the brand before making their preference for the brand in the “Bottom of the funnel” stage. This is then followed by the “retention stage” of the customer, where customers make repeat preference or repurchase (e.g., Bolton, 1998), which may get extended to include the “loyalty loop” as part of the overall customer decision journey (e.g., Court et al., 2009). Further, Goersch

(2002) suggests that the brand CCI service capability is consistent all throughout the customer purchase journey.

Therefore, in line with previous pertinent research, in this thesis cross channel integration is defined as a brand cross channel integration level, which reflects its transformational natural. This approach allows us to investigate consequence of CCI on consumer perception spanning across their three-staged purchase journey.

4.2.4. Stimulus-organism-response (SOR) framework

The SOR framework (Mehrabian and Russell, 1974) is widely used to explain customer shopping behaviours in different retail contexts, including traditional retailing (Kumar and Kim, 2014), e-retailing (Izogo and Jayawardhena, 2018; Rose et al., 2012), multichannel retailing (Pantano and Viassone, 2015) and omnichannel retailing (Zhang et al., 2018), and in various contexts of branding such as brand experience (KR & Venkatesan, 2020), brand sustainability (Grădinaru et al., 2022; Mim et al., 2022), augmented reality (Tomar et al., 2022), artificial intelligence (Ho & Chow, 2023), social media marketing (Junbin & Xinyu, 2022), green marketing (Guerreiro et al., 2023), brand coolness (Attiq et al., 2022), brand Facebook page (Aslam & Ramos de Luna, 2021), social media advertising (Lou & Koh, 2018), influencer marketing (Zhou et al., 2021). This approach emphasizes the impact of external stimuli (S) on consumers' internal organism (O), which then influences their behavioral reactions (R).

Cao and Li (2015) divided omnichannel integration transformation into four phases with following phase wise key indicators; phase-1 represents presence in different channels and different retail-mix policy, phase-2 represents integrated marketing communication, phase-3 represents integration of consumer order fulfillment and information access, phase-4 represents continuity of foundationals, rear-end system

consolidation, and organizational transfiguration. Cattapan and Pongsakornrungsilp (2022), by partially including indicators that represent phase-3 & 4 of this omnichannel transformation criteria, considered omnichannel as stimuli. Similarly, through various omnichannel transformation phase indicators of logistic service integration (Zhang et al., 2018), channel service configuration and integrated interactions (Yang Li et al., 2018; Natarajan et al., 2023), omnichannel collaboration (Chen et al., 2022), extant literature considered omnichannel transformation as a stimuli by considering subset of the criteria provided by Cao and Li, 2015. Seeking support of these extant literature we consider brand omnichannel transformation as SOR framework's environmental stimulus, which is defined as features, events, objects, marketing-related factors, or environmental components associated with the shopping environment that customers encounter (Zhang et al., 2018)

In addition, Zhang et al. (2018) define organism as the interior states of consumers, encompassing internal processes such as sensing, feeling, and thinking, as well as affective, emotional, and cognitive states like pleasure and satisfaction. Costa Climent et al., 2022 and Iftikhar and Helfert, 2019 through conceptual overview offered a guidance and concluded that an omnichannel is a source of value creation. Further, the unique value creation brought about by omnichannel integration transformation (Cao, 2014; Y. Chen and Chi, 2021; Emrich et al., 2015; Herhausen et al., 2015; M. M. Pereira and Frazzon, 2021) increase customer value perceptions of customers by providing an integrated service experience that is not available to customers in individual channels (Wagner et al., 2013; Zhang et al., 2018), thereby helping organizations to better serve customers. Traditionally, some of the dimensions of perceived value of consumer includes; emotional value, social value, functional value (Sweeney & Soutarh, 2001), extrinsic value - utilitarian use, intrinsic value - hedonic appreciation, and systematic value - logical reasoning

(Danaher & Mattsson, 1994; De Ruyter et al., 1997; Lemmink et al., 1998), quality, emotional response, reputation, monetary and behavioral price (Petrick, 2002). These dimensions suggests that customer perceived value and its mechanics can be considered as ‘organism’ in SOR framework.

Finally, customer brand preference and loyalty are suggested to serve as the "behavioral response" inside the SOR paradigm. The framework has been extensively used to study various behavioural responses, such as the intention to purchase (Zhang et al., 2018), and repurchase (Lee et al., 2019), unplanned or an impulse buying (Pereira et al., 2023), patronage intentions (Lim et al., 2022), and loyalty (Gao and Huang, 2021; Hamouda, 2019) and their intention to spread positive word of mouth about the firm across channels (Li et al., 2023). This suggests that brand preference and loyalty can be considered as ‘response’ in SOR framework.

4.2.5. SOR versus SOBC framework

We provide below comparison through Table 4.1 of these two framework and provide justification to deploy SOR against SOBC, though the latter looks close to the model in the current study.

As per the explanation provided in the table, we can conclude that the SOR framework is more appropriate in the current study because of the following reasons:

1. It is commonly used in marketing research literature to assess the influence of stimuli, like cross channel integration service strategy on consumer behavior
2. The study is conducted in a specific contexts and consumer behavior, and not beyond it to understand broader human behaviour in contexts of social,

psychological, or organizational settings wherein SOBC framework that offers a more comprehensive approach is utilized.

3. SOR framework is the framework that has been used frequently in the literature studying in the similar context of the current study

Table 4.1: Comparison of SOR and SOBC framework

SOR Framework (Mehrabian & Russell, 1974)	SOBC Framework (Bandura, 1977)	Conclusion
The SOR framework investigates how ambient and internal stimuli (S) affect an organism's internal states (O), leading to a reaction (R). (Laato et al., 2020).	SOBC considers associations among an individual's internal state (O), behaviour (B), and consequences (C), thereby extending SOR.	Hence, SOR framework is relevant to our study as we are primarily studying impact of the external stimuli of CCI on the internal state of perceived value.
The most widely used theoretical frameworks for describing client buying behaviors are used in diverse contexts: e-retailing (Izogo & Jayawardhena, 2018), Omni-channel retailing (Y. Chen & Chi, 2021; Min Zhang et al., 2018), of branding such as brand experience (KR & Venkatesan, 2020), augmented reality (Tomar et al., 2022), artificial intelligence (S. P. S. Ho & Chow, 2023), and social media marketing (WANG & JIANG, 2022)	Could not find such an extensive adoption of the framework and almost negligible in the context of retailing	Hence, as there's theoretical support for using the framework, we deploy SOR framework in our study
Stimulus		
Prior research has investigated the impact of channel availability or channel integration as stimuli on consumers' cognitive and emotional states. (Cheah et al., 2022; X. J. Lim et al., 2020; Zimmerman, 2012)	Could not find literature that studied such dimension of channel integration after being treated as stimuli in SOBC framework	Hence, as there's theoretical support for using the framework, we deploy SOR framework in our study
CCI services is considered as stimulus (Xiaoxia Chen et al., 2022; Natarajan, Raghavan, et al., 2023; Min Zhang et al., 2018)	No study found that used CCI as stimulus in SOBC framework	Hence, as there's theoretical support for using the framework, we deploy SOR framework in our study

Organism		
Several marketing researchers utilized this model to investigate the influence of the retailing environment on customers' behavior by examining the role of mediators, such as consumer empowerment, in shaping consumers' internal judgments. (Mishra et al., 2023; Min Zhang et al., 2018), perceived values (T. Chi & Chen, 2020), perceived risk (Pantano & Viassone, 2015), Trust (Bezbaruah et al., 2022; Cheah et al., 2022; A. N. H. Le & Nguyen-Le, 2020; Mishra et al., 2023; P. Rodríguez-Torrico et al., 2019; Min Zhang et al., 2018), and awareness (Haque et al., 2021; Ling et al., 2023; X. Yan et al., 2018; Q. Yang et al., 2022; Z. Yu et al., 2021), which according to Aaker (1991) together form customer-based brand equity (A. Sharma et al., 2022), Seamless experience (Xiaoxia Chen et al., 2022; Paula Rodríguez-Torrico et al., 2023)	Could not find literature that studied such constructs of organism by deploying SOBC, which are an integral part of the model in the current study.	Hence, as there's theoretical support for using the framework, we deploy SOR framework in our study
Researchers have also discovered that consumer perceived value plays a crucial role in connecting environmental cues and customers' reactions. (T. Chi & Chen, 2020; Chopdar & Balakrishnan, 2020; Xiao et al., 2019)	Such usage of perceived value as organism in the context is not available in the literature that is using SOBC framework	Hence, as there's theoretical support for using the framework, we deploy SOR framework in our study
Response		

Customer brand preference and loyalty is proposed to represent ‘behavioural response’ in the SOR framework as such behavioural responses like purchase intentions (Zhang et al., 2018), impulse buying (M. Pereira et al., 2023), customer loyalty (M. Gao & Huang, 2021), patronage intention (X. J. Lim et al., 2022)	SOBC splited this into two steps of behavioural and consequences. But, as loyalty has not been studied as a consequence.	As there are body of literatures that deployed SOR framework and has treated both the constructs of preference and loyalty as response, we stick to SOR framework. Also, there's no study that has deployed SOBC framework and studied loyalty as consequence. Hence, as there's theoretical support for using the framework, we deploy SOR framework in our study
Purpose of using SOR framework		
The S-O-R framework is commonly used in consumer behavior and marketing research to analyze how marketing stimuli (e.g., advertisements, product features) influence consumers' internal perceptions and emotions, ultimately affecting their purchase decisions and behavior.		
The applicability and validity of the S-O-R theory in predicting customer behavior like customer preference and loyalty in an omni-channel environment have been confirmed.		
It provides a structured & comprehensive way to analyze & explain human behavior by considering interplay between external stimuli, internal processing, & observable responses		
The S-O-R theory offers a comprehensive framework for understanding how the integration of manufacturer consumer brands across different channels (stimulus) influences consumer choice and loyalty (response). It also considers the mediating function of customer perceived value and its many elements (organism).		

4.2.6. Cross channel integration level or Brand Omni channel transformational phase in a retail value-chain (retail channel structure)

Based on the Porter's (1985) concept of the 'value-chain', retail value-chain refers to the information and product flow between design, manufacturer, suppliers, shipping agents, warehouses, shelves, consumer and retailers to the point of consumption (Hübner et al., 2018; Reinartz et al., 2019). The value chain is a set of processes where all the stakeholders adds value to the customer across various activities (Porter's, 1985). In retailing, the value chain comprises of all the stakeholders and processes needed for retailers to deliver an end product or service to a customer (Hagel et al., 2016). In its most fundamental form, this value-chain includes (brand) manufacturers, retailers, and consumers (Reinartz et al., 2019).

Organizations' channel strategies have evolved from mono-channel to multi-channel (MC), from siloed MC to fully-integrated omnichannel (OMC) by transformation process that passes through various degrees (phases) of cross-channel integration (CCI) (Mirsch et al., 2016). CCI, or Channel Coordination Index, refers to the extent to which a company aligns its goals, design, and implementation of its channels in order to generate internal synergies and provide advantages to customers (Cao and Li, 2015). MC is referred to a blending of mutually exclusive offline and online channels (Montoya-Weiss et al., 2003) like retail storefront, website, catalogue & promotional channels where they operates in silos. OMC is a strategy where communication channels & supporting resources cooperate to achieve improved user experience & relationships. As acknowledged by the literature, organizations gradually transform itself through various intermediate phases to attain omnichannel integration (Cakir et al., 2021; Lanlan Cao and Li, 2015; Cocco & Demoulin, 2022; Eriksson et al., 2022; Tyrväinen et al., 2020; Ye et al., 2018; J. Zhang et al., 2010), within the CCI continuum by

starting at MC phase at one end and achieving OMC, on the other (Neslin et al., 2006).

Traditionally, literature has based its assessment of channel integrationness on a limited dimensions (Oh et al., 2012; Schramm-Klein and Morschett, 2005), which got expanded into various facet of business like fore-end and rear-end processes (Sousa and Voss, 2006), organizational structure (Zhang et al., 2010), branding and promotion (Goersch, 2002), physical integration (D. R. Bell et al., 2014), assortment alignment (X. Pan et al., 2003), informational integration (Bendoly et al., 2005), reciprocity (H. H. Lee & Kim, 2010). Cao and Li, 2015 presented the most comprehensive set of dimensions that reflect several transformational phases that the organization adopt and implement during their OMC transformation journey.

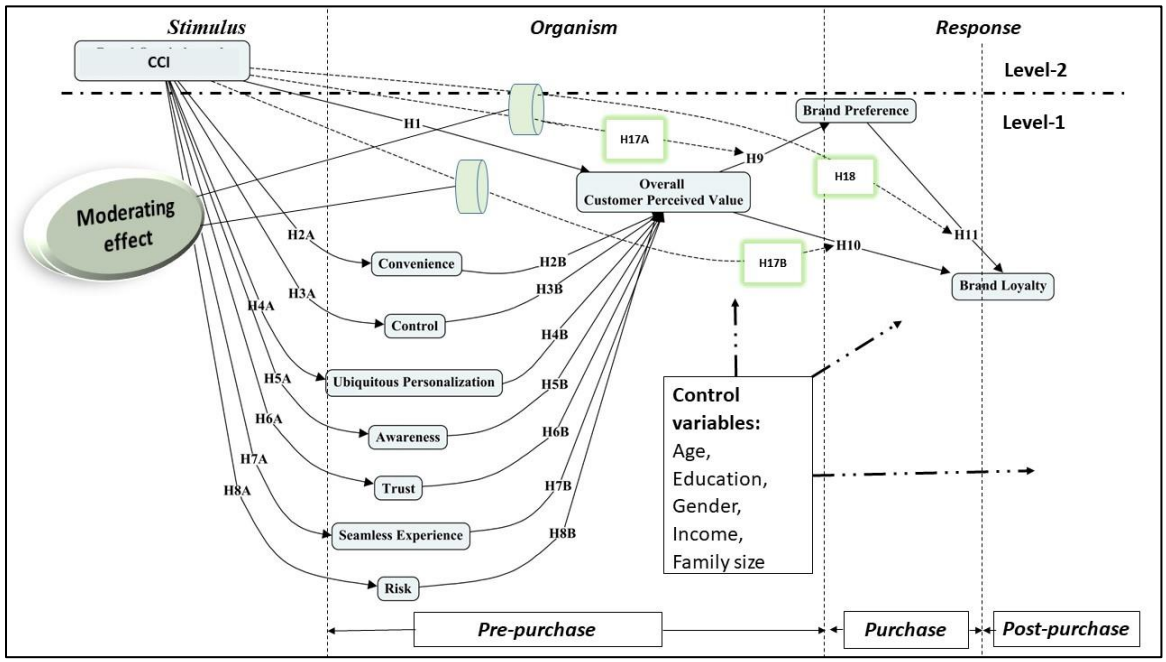
Most of the omnichannel studies have been revolving around retailers, with few having brought out the role of brand, e.g., Juaneda-Ayensa et al., 2016; Verhoef et al., 2015; Wojciech Piotrowicz and Cuthbertson, 2018 but again it is implicitly discussed brand and primarily its centered around offline or online retailer brands (intermediaries) or their private-label brands. Moreover, these studies have adopted theories from the past that were developed on a retailers. The academics has to do a little catching-up here with the practice and should conduct studies that explicitly discusses manufacturer brand as some of the consumer manufacturers brands, like Nike, have already choose to vertically integrate many of the retail value-chain activities (or by shortening value-chain, e.g., Hagel et al., 2016) traditionally performed by retailers through omnichannel transformation, to achieve objectives of having a better understanding of the customers, develop relationship, and satisfy them through fulfilment of their demand (Gielens & Steenkamp, 2019). So, in this study the theories established in the past on retailers is applied on brands

(manufacturer) as done by past literature that discusses brands against retailers. Moreover, as manufacturer brands has assumed a role of a retailer by forward integration, theories established for retailers are adopted in this study for the development of hypotheses on manufacture consumer brands.

4.3. Model development and hypotheses

We propose a theoretical model that hypothesizes cross channel integration services for complete purchase journey as antecedents to consumers' perceived value, which encapsulate cumulative effect of seven elements of awareness, convenience, risk perception, trust, control, seamless experience and ubiquitous personalization, for brands which, when combined, could shape their preference and loyalty for that very brand (see Figure 4.4). Further, the brand preference in a purchase phase leads towards loyalty during post-purchase phase.

Figure 4.4: Theoretical model of Brand Preference through Cross Channel Integration



4.3.1. Cross channel integration and customer perceived value

Consumers anticipate that retailers will be capable of delivering a seamless, consistent and personalized service in which they also have enriched retail experience (Karine et al., 2016). Organizations, in order to stay ahead of competition, need to generate higher value for consumers (Arun Sharma et al., 2001). Cross-channel integration service is one such strategy, which promises higher value for consumers through capabilities as discussed. Goersch (2002)'s studies indicate that an increasing number of retailers (brands) are adopting multichannel integration services due to the superior advantages it offers over separate channels (Gulati and Garino, 2000).

Goersch (2002), through various studies found that number of retailers that provides 'consistent shopping experience' through adoption of multichannel integration service, have increased as it enables synergies between channels. This means that the advantages of multi-channel integration under various circumstances exceeds that of 'separated channels' as well as challenges of channel integration implementation (Ranjay Gulati & Garino, 2000). Existence of synergies between offline and online channels were first identified by (C. Steinfield et al., 2002).

Goersch (2002), through application of "Purchase and Consumption" (PCP) construct propounds the model that relates "multichannel integration" to "consumer benefit". In the retail environment, integrating different channels to create an omnichannel experience improves customers' perception of value. This has been supported by studies conducted by Chen and Chi (2021), Huré et al. (2017), Kumar and Reinartz (2016), and Leroi-Werelds et al. (2014). This value is also extended to the brand, as discussed before. Furthermore, different degrees of integration result in different amounts of perceived value. Building upon the existing premises,

previous debates, and model, this research expands the model and puts forth a proposal.

> ***Hypothesis 1****: Cross channel Integration service in an entire customers' purchase journey has positive effect on customer perceived value*

4.3.2. Cross Channel Integration and seven factors of Customer Perceived Value

As PCP comprise of cyclic activities of a consumers' purchase-consumption cycle to satisfy needs, drawing from the close inspection of all the elements of multichannel integration during each step in this cycle, the benefits (or perceived value) identified are increased awareness, increased trust, risk perception, convenience, control, ubiquitous personalization, and seamless experience (Goersch, 2002):

4.3.2.1. Cross channel integration, convenience, and customer perceived value

Conventionally, convenience is defined as the capacity to decrease non-monetary expenses for consumers, such as time, energy, space, speed, flexibility, and effort (Berry et al., 2002; Bevan and Murphy, 2001; Forman et al., 2007; Meuter et al., 2000; Mirsch et al., 2016; Moeller et al., 2009; Reimers and Clulow, 2009; Seiders et al., 2007), as well as the ease of facility, service, and shopping convenience (Jin and Kim, 2003), trading hours (Anselmsson, 2007; Bell, 1999; Demirci Orel and Ali, 2014; El-Adly, 2007; Howell and Rogers, 1981) during the process of purchasing and after the purchase has been made.

Omnichannel integration improves convenience (Chong, 2018) and offers consumers a satisfactory experience throughout their purchasing journey, including

the freedom to choose (Berry et al., 2010), flexibility (Trenz et al., 2020), easy of leaving a website (Neslin and Shankar, 2009), save time and energy, gain convenience benefits (Meuter et al., 2000). It also facilitates speed and effort (Choudhury and Karahanna, 2008) by providing consumers with various options (Saeed et al., 2003). On the other hand, a single channel consistently causes certain inconveniences for the client (Viswanathan, 2005).

Based on the preceding theoretical and empirical evidence, and the discussion, we propose the following hypothesis:

> ***Hypothesis 2A****: Cross channel Integration service in an entire customers' purchase journey has positive effect on convenience*

The assessment of the three elements of transaction utility at the judgment stage, namely perceived price, convenience, and pleasure, is referred to as "perceived value." This represents the overall satisfaction or usefulness derived from the transaction, as described by (Thaler, 1985; V. A. Zeithaml, 1988). This suggests that "convenience" is a component of perceived value, and it influences the overall value in an Omnichannel setting (Park and Kim, 2022; Pereira et al., 2023). In addition, convenience encompasses both the time and space dimensions of the service delivery process (for example, Hoyer and Brown, 1990; Peterson and Balasubramanian, 2002). The importance of access convenience has been highlighted, particularly for services that rely on consumer involvement, as customers need to be physically present at the appropriate time and location (Berry et al., 2002).

Convenience has been decomposed into three components of speed convenience, effort convenience and flexibility convenience (Seiders et al., 2007). The above literature and the discussion suggests that the convenience is factor of CPV.

Convenience, which is one of the practical benefits, is the primary motivator for customers engaging in omnichannel purchasing (Geng & Chang, 2022). Moreover, the factor of convenience has a substantial impact on the desire to engage in showrooming, and this link is mediated by the total customer perceived value (CPV) (A. Shankar et al., 2021).

Hypothesis 2B*: Convenience has positive effective on CPV in a Cross channel integrated environment*

4.3.2.2. Cross channel integration, control and customer perceived value

Consumers are constantly interacting with service providers' organizational environment during the course of utilization of services (Bateson, 2000). It is here that the 'need for control' arises for the consumers. For example,by conducting online research before to visiting a physical store, customers may identify the specific product characteristics they are willing to compromise on, enabling them to make a better informed decision when making a purchase in-store. (Neslin et al., 2006). This gives sense of an elevated control to consumers in selecting the right product. The concept of control is an integral part of human motivations (Whyte, 1959). Averill (1973) framework categorizes control into its three forms: behavioural, cognitive and decisional.

CCI promotes self-control by allowing individuals the opportunity to utilize several channels in different circumstances (Goersch, 2002). For example, consumers utilize internet to conveniently search for things and subsequently visit physical

stores to make purchases, since they desire to physically interact with the product and engage in a confidential transaction (Neslin and Shankar, 2009). Consumers have the ability to exercise a higher level of control over the content they browse online and are more engaged in the process of gathering information online (Berthon et al., 1996; Hoffman & Novak, 1996). In addition, omnichannel integration services enable customers to have complete control over the location, timing, and method of shopping and receiving deliveries during their shopping trip (Zhang et al., 2018). The aim is to provide customers with a wider range of buying options by maintaining consistent content and procedures. This allows consumers to have complete control over their whole shopping experience (Mika Yrjölä et al., 2018). Also, omnichannel integration alleviates impulsive consumption by increasing the transparency of the shopping process, thus giving consumers more control over it (Shao & Lassleben, 2021).

Based on the preceding theoretical and empirical evidence, and the discussion, we propose the following hypothesis:

> ***Hypothesis 3A****: Cross channel Integration service in an entire customers' purchase journey has positive effective on control*

Control has been considered as a component factor of CPV in several previous studies (e.g. Leckie et al., 2017). In the cross-channel context, control provides value in the following three ways: *behavioural control*, *cognitive control*, and *decisional control.* We therefore consider control as a component factor of CPV.

> ***Hypothesis 3B****: Conrol has positive effective on CPV in a Cross channel integrated environment*

4.3.2.3. Cross channel integration, ubiquitous personalization, and customer perceived value

Goersch, 2002 conceptualized ubiquitous personalization as the perceived value that consumers seek to pacify their customization needs. Once these needs are fulfilled by organizations, consumers would get involved into a relationship with it (Sheth and Parvatiyar, 1995).

Personalization refers to the extent to which consumers receive accurate, personalized, and tailor-made information and services. Some researchers declare that personalization is one of the most important service quality criteria in the digital environment (Shi et al., 2020). Furthermore, Piotrowicz and Cuthbertson (2014) and Peltola et al. (2015) argue that the creation of a personalized experience is a factor of an omnichannel business and Juaneda-Ayensa et al. (2016) suggest that personalization in omnichannel retailing is a predictor that needs a special exploration. Omnichannel shoppers shop anytime and anywhere, which is ubiquitously, and also are willing to receive personalized services (Ozok and Wei 2010)

Ball et al., 2006 states that unlike products, almost all services are personalized since the time it has come into existence. This is also true for cross channel integration services like any other services that delivers “the right kind of service to the person at the right time” (Tam & Ho, 2006), where consumer is passive, and all personalization efforts are initiated by the brand (for example, (Aguirre et al., 2015) to stay relevant to the target customer (Riegger et al., 2021). Further, previous studies has established the fact that the channel integration is required to meet customer’s increasing expectation of shopping experience that is personalized (Alexander and Kent, 2022; Brynjolfsson et al., 2013; Grewal et al., 2017; Hossain et al., 2019).

Mpinganjira (2014) posited that the concept of PER had been interchangeably used with customization. Goersch, 2002 conceptualized ubiquitous personalization as the perceived value that consumers seek to pacify their customization needs. Previous studies have considered personalization as a factor of value derived from CCI (e.g., Hubert et al., 2020). Also, personalization have been considered one of the aspects that improves customer shopping experience (J. Y. M. Kang et al., 2015; C. Xu et al., 2015) and hence perceived value of the omnichannel integration.

Cross-channel integration strategy facilitate organization to offer products and services that exactly meets individual-level needs (Keeney, 1999) by integrated information system, centralized data base of consumers, aligned promotions and services (Cao et al., 2015) for competitive advantage (Ball et al., 2006), and where earlier mass-produced has been already got converted to mass customized (Pine and Gilmore, 1998).

Hence, by extending the definition of "ubiquitous personalization" provided by Ball et al. (2006), the study refers it as an offerings or solutions that brands, during its omnichannel transformational journey, provides by either creation or adjustment or configuration of integrated-channel-service combinations to fit the requirements of the customers during their purchase journey.

Based on the preceding theoretical and empirical evidence, and the discussion, we propose the following hypothesis:

> ***Hypothesis 4A****: Cross channel Integration service in an entire customers' purchase journey has positive effective on ubiquitous personalization*

“Ubiquitous personalization” is defined as any creation, adjustment, or combination of a channel service to fit the individual requirements all across varied organization’s channels during purchase journey of a customer (Ball et al., 2006). It includes the notion of entirely individualized 'synergized-channel services', as well as “mass customized” present across varied organization's channel (Pine and Gilmore, 1998) services. Previous studies have considered personalization as a factor of value derived from cross-channel integration (e.g., Hubert et al., 2020).

Hypothesis 4B*: Ubiquitous personalization has positive effective on CPV in a cross channel integrated environment*

4.3.2.4. Cross channel integration, awareness, and customer perceived value

Brand awareness or Awareness refers to a consumer's capacity to identify and remember a brand in various contexts (D. A. Aaker, 1996; K.L. Keller, 2008). Brand awareness comprise of two dimensions, depth and width ((Steve Hoeffler & Keller, 2002), generates knowledge richness (Malik et al., 2013 Valkenburg and Buijzen, 2005), is a probability that consumer have information about brand service, products and about all features of the brands (Jamali & Khan, 2018).

Cross-channel integration enables customers to conveniently collect the necessary information, effectively reducing information asymmetry as perceived by them (Cao et al., 2015). Integrating branding consistently across different channels can enhance brand awareness and brand recognition (Yeğin and Ikram, 2022). This is because when customers gather information from multiple touchpoints (such as peers, reviewers, and retailers) through various channels, their initial consideration set often expands (L. Gao et al., 2019).

Further, coordinated marketing programs reduce consumers' confusion on product in specific and brand in totality, which help them to be cognitively aware. The same effect happens through integrated branding and communication, which is considered as one of the key capabilities of CCI (Cao et al., 2015). Also, during the brand omnichannel transformational journey, its cross channel integration service enables consumers to conveniently gather the necessary information, reducing their perceived information asymmetry with varying degree of impacts at different phases (Cao and Li, 2015). The second stage of cross-channel integration development involves the integration of brand and marketing communication across several channels. By consistently using the same brand across many platforms, companies may enhance customer awareness of their brand. (Cao et al., 2015).

Based on the preceding theoretical and empirical evidence, and the discussion, we propose the following hypothesis:

> ***Hypothesis 5A****: Cross channel Integration service in an entire customers' purchase journey has positive effective on awareness*

Extant literature has shown that " greater awareness" contributes to a higher CPV in various ways, viz; cognitive (Lapierre, 2000; Sweeney, Soutar, and Johnson, 1999), extrinsic – as per axiology of value theory (De Ruyter et al., 1997; Lemmink et al.,1998), utilitarian (Babin and Babin, 2001; Babin and Attaway, 2000; Chiu et al., 2005). Thus, we consider awareness as one of the factors of CPV.

> ***Hypothesis 5B****: Awareness has positive effective on CPV in a Cross channel integrated environment*

4.3.2.5. Cross channel integration, trust, and customer perceived value

Trust is established when clients have a sense of security not just during the transaction, whether it is conducted online or offline, but also when they have confidence in the products, communication, and service. Trust has been broadly conceptualized as either experience-based trust or cue-based trust (Wang et al., 2004).

Brand trust, in this study, is defined as the propensity of the typical consumer to depend on the brand's competence in fulfilling its purpose (Chaudhuri and Holbrook, 2001) through cross-channel operations as they believe of their competence, benevolence and integrity (Christodoulides et al., 2006; Frasquet and Miquel, 2017; Komiak and Benbasat, 2006; Schramm-Klein et al., 2011; Selnes, 1998; Sirdeshmukh et al., 2002).

Implementing a cohesive strategy for branding and marketing, as well as maintaining consistent product offerings and pricing across different channels, helps to alleviate consumer anxiety and strengthen their confidence in the business. (Schramm-Klein and Morschett, 2005).

Cao and Li (2015) suggests that improved trust is one of the five-quality dimension that that cross-channel integration impacts consumers, positively. Similarly, Helbling et al., 2011 reports that “Trust”, a value proposition of multichannel retailing, is one of the aspects that impact the customer's purchasing choice.

Studies have found customer trust increases when information systems that meet the expectation of the customers is deployed (Ha and Stoel, 2009). Identified dimensions of the trust significantly differentiate between experiences received from the silos versus integrated channel services of the brand.

Based on the preceding theoretical and empirical evidence, and the discussion, the below hypothesis is proposed:

> ***Hypothesis 6A****: Cross channel Integration service in an entire customers' purchase journey has positive effective on trust*

Trust in a brand or organization is the measure of the typical customer's confidence in the brand or organization's capability to fulfill its intended purpose (Chaudhuri and Holbrook, 2001) through cross-channel operations as they (customer) believe of their (brand's or organization's) competence, benevolence and integrity (Komiak and Benbasat, 2006). Trust is therefore an important component factor of perceived-value in cross-channel integration.

Zhang et al. (2018) considered channel integration, as the stimulus, with trust as the organism, and purchase intention as response. Omnichannel service delivery has a crucial role in establishing trust, which is a fundamental component of consumer perceived value (Dalla Pozza, 2023). Similarly, Helbling et al., 2011 reports that "Trust", a value proposition of multichannel retailing, is one of the factors that influence purchase decision of the customer.

> ***Hypothesis 6B****: Trust has positive effective on CPV in a cross channel integrated environment*

4.3.2.6. Cross channel integration, seamless experience and customer perceived value

If all channels are interconnected, customers have the ability to initiate their purchase process on one channel and finish it on another, while transitioning

between different channels. This creates a smooth and uninterrupted experience that enhances convenience and involvement, while also guaranteeing a consistent brand encounter (Eaglen, 2013). The customer's engagement is reflected in several dimensions, including intellectual, emotional, sensory, physical, and spiritual aspects. (Gentile et al., 2007)

Jocevski et al., 2019 provided various dimension of seamless experience and categorized based on three-purchase stage.

In this study, we define seamless experience as ‘sensory, affective, intellectual and behavioural responses evoked by the brand-related stimuli, especially that of “integration” of channel provided to the customers such that they can start their purchase journey on one channel, move across any of the channels and end the process at any channel of choice (Zarantonello and Schmitt, 2010).

During the pre-purchase stage, buyers may briefly explore several channels to assess the range of items accessible (Morales et al., 2005). However, they must ultimately make a decision by analyzing the array of products supplied by different businesses across these channels. Ensuring consistent product offerings across different sales channels allows customers to effortlessly and comfortably navigate their purchasing process (Verhoef et al., 2007). This enables them to optimize their choices and ultimately have a great shopping experience (Chang and Wang, 2011).

On the other hand, if customers find it difficult to understand what they see in each channel, they will have to put in more effort to arrange and classify the different items available across multiple channels. This could lead to a decrease in the perceived efficiency of searching (Sloot et al., 2006) and a delay in making purchase decisions. In addition, Emrich et al. (2015) found that integrating

assortments across different channels might improve the customer's ability to mentally visualize how the assortment of things can be used. This, in turn, can boost the perceived diversity of the assortment and raise the intention to make a purchase (Dahl and Hoeffler, 2004).

An important obstacle that companies have in achieving a consistent customer experience across several channels is the process of abstracting and analyzing data (Verhoef et al., 2015). By utilizing advanced artificial intelligence systems, companies will have the capability to provide individualized and smooth consumer interactions in real-time (Doorn et al., 2017; Huang and Rust, 2018).

The progress in technology has caused the boundaries between physical and virtual surroundings to become less distinct, resulting in the swift growth of omnichannel firms. These businesses integrate online and offline channels to provide a seamless purchasing experience (Choudhury and Karahanna, 2008)

The omni-channel retailing concept refers to the process of seamlessly integrating the physical, internet, and mobile channels to enable customers to shop in a seamless manner across them has been described as the *omni-channel* retailing model (Brynjolfsson et al., 2013).

The omnichannel strategy enables retailers to achieve synergy among their many channels and deliver a smooth shopping experience to consumers. (Piotrowicz and Cuthbertson, 2014; Verhoef et al., 2015). Further, cross channel integration strategy of brands creates seamless experience for customer (A. Mosquera et al., 2017; Verhoef et al., 2015; Mika Yrjölä et al., 2018)

A corporation that attains the utmost level of collaboration within functional areas, processes, and capabilities (via cross-channel integration) is capable of providing a smooth experience to its consumers. (Shukla et al., 2013).

Hence, the below hypothesis is proposes:

> ***Hypothesis 7A****: Cross channel Integration service in an entire customers' purchase journey has positive effective on seamless experience*

A body of literature in the field of 'online shopping', and 'multichannel' suggests that "experience or seamless experience" is a construct that consumers perceive as value. These studies includes good shopping experience (Balasubramanian, Raghunathan, and Mahajan, 2005; Alba et al., 1997), online shopping experience (Chen and Dubinsky, 2003), and personalized customer experience (Kim et al., 2019).

> ***Hypothesis 7B****: Seamless experience has positive effective on CPV in a Cross channel integrated environment*

4.3.2.7. Cross channel integration, risk, and customer perceived value

Bauer, 1960 introduced the concept of a perceived risk that is related to the delay in receiving goods or services due to either unavailability or delay in its delivery based on the behavioural propositions (Westbrook et al., 1978), uncertainty and adverse consequences of engaging in an activity (G. Dowling & Staelin, 1994), economic risk, social and privacy risk (Sirrka L. Jarvenpaa & Todd, 1996), personal and performance risk (Jarvenpaa and Todd, 1996).

Based on (Glover and Benbasat, 2010) we operationalize risk in our context of cross channel as risk likelihood and risk severity (Trenz, et al., 2020), with prior refers to a possible loss while completing any kind of transaction with the brand (Dowling, 1986) and the latter refers to a possible loss while completing any kind of transaction with the brand (Taylor, 1974).

Consumers may ensure a safe and secure purchasing experience by utilizing a variety of channels. This approach allows them to take advantage of the benefits offered by several channels and overcome any shortcomings associated with specific channels (Zhang et al., 2010). Furthermore, the integration and consistency of Branding across channels in cross channel integrated brands enables consumers to transfer the favorable brand image associated with one channel to another (Dholakia and Zhao, 2010), which might reduce clients' perceived risk when it comes to choosing a brand (Kwon and Lennon, 2009). Previous research has demonstrated that integrating several sales channels might decrease the perceived risk that customers associate with online goods purchases (Savastano et al., 2019; Wu and Chang, 2016), and channel synergy (Herhausen et al., 2015; Yang Li et al., 2020; Xu and Jackson, 2019).

Further, perception of risk significantly impacts consumer purchase behaviour (Sheth and Parvatiyar, 1995) attitude towards shopping (Jarvenpaa and Toad, 1996); inclusion or exclusion of search and evaluation step in the whole purchase decision process (Griffin and Hauser, 1993). Existing literature defines perceived risk as the degree of uncertainty that customers feel while utilizing the omnichannel shopping strategy to purchase items, and suggests that this method minimizes that uncertainty. (X. Xu & Jackson, 2019).

Both the identified dimensions of the risk significantly differentiate between experiences received from the silos versus integrated channel services of the brand.

Therefore, the below hypothesis is proposed:

> ***Hypothesis 8A****: Cross channel Integration service in an entire customers' purchase journey has negative effective on perceived risk.*

Extant literature decomposes risk into two factors, viz; risk likelihood and risk severity. Risk Likelihood *is a* perceived likelihood of a possible loss while completing any kind of transaction with the brand (Dowling, 1986) and Risk Severity is *a p*erceived severity of a possible loss while completing any kind of transaction with the brand or organization (Taylor, 1974). Chen and Dubinsky's (2003) model of CPV included 'perceived risk'.

Based on the above definition and conceptualization, it can be concluded that the risk is a factor of CPV as reduction of risk of unavailability of product and/or service results in higher CPV. All the three key drivers of CCI, viz; continuity of foundationals, rear-end sytem configuration & system and organizational transfiguational shall come into play to ensure reduction of risk for the customer and enhance perceived value.

> ***Hypothesis 8B****: Risk has negative effective on CPV in a Cross channel integrated environment*

4.3.3. The overall customer perceived value and Brand preference

BP refers to the collection of brand assets and liabilities associated with a brand, as well as a customer's subjective and intangible evaluation of the brand, which goes beyond its objectively assessed worth. (Keller, 1993; Smith and Aaker, 1992).

CPV is associated with preference with prior impacts the latter (Alamro and Rowley, 2011; Chiu et al., 2010). The prior study conducted by Hellier et al. (2003) has presented empirical data that establishes a causal link between perceived value and preference. When a consumer recognizes the benefits of using cross-channel integration services, they build a preference for these services.

Similarly, there is a body of extant literatures that suggests existence of significant relationship between CPV and preference, for example, (Rahi and Ghani, 2016) and some of them have been tabulated in the literature review chapter. Thus, the following hypothesis can be formulated:

> ***Hypothesis 9****: Customer perceived value has positive effect on* customer preference behavior *in cross channel integrated environment*

4.3.4. The overall customer perceived value and Brand loyalty

Brand loyalty (BL) is characterized by a strong and enduring commitment to repeatedly repurchase or patronize a preferred product or service, resulting in repeated brand purchases. (Oliver, 1999).

Moosa and Hassan (2015) studied Consumers' Perceived value in automobile industry in Saudi Arabia and found significant relationship between its various elements and brand loyalty. Elements studied were Functional values, Emotional, Social values, Conditional values, Epistemic values. Similarly, there is a large body

of extant literatures that has found significant relationship with CPV and Brand Loyalty, some of them has been tabulated in the chapter on literature review.

Based on the preceding theoretical and empirical evidence, and the discussion, the following hypothesis is proposed:

> ***Hypothesis 10****: Customer perceived value has positive effect on* brand preference *in cross channel integrated environment*

4.3.5. Brand preference and brand loyalty

Consumers who have a strong affinity for a certain brand are more likely to develop a greater emotional tie to that brand (Keh et al., 2007). Prior research has established a favorable correlation between brand preferences and brand loyalty. (Chaudhuri and Holbrook, 2001). The relationship between brand preference and brand loyalty is strong and powerful, with prior having strong effect on the latter. (Chinomona and Pooe, 2013; Keller, 2008; Morrison and Crane, 2007)

> ***Hypothesis 11****: BP has positive effect on* BL *in cross channel integrated environment*

4.3.6. The mediating effect

As discussed, customers purchase journey starts with the awareness, which is followed by interest arousal, evaluation of the brands and its service through the lens of a perceived value, preference (purchase) decision for the brand, and is concluded with the repeat preference (loyalty). Every step is influenced by the one in the preceding, which indicates that there exists various mediating variables in the complete journey. Other studies has tested possible mediating effects of these variables during a customer purchase journey in an Omni channel environment;

convenience (Chen and Chi, 2021), control (Rippé et al., 2017; Zhang et al., 2018), consumer experience (Alam and Gani, 2019), trust (Cassab and MacLachlan, 2008; Hou and Wonglorsaichon, 2016), brand equity (Khadim et al., 2018), seamless experience (Chen et al., 2022), and risk (Ma, 2017; Ortlinghaus and Zielke, 2019), customer perceived value (Zhao et al., 2023), brand preference (R. Wong, 2014; Yasri et al., 2020).

In our study, association of cross channel integration with consumer perceived value is influenced by various variables of convenience, control, ubiquitous personalization, consumer experience, awareness, trust, seamless experience, and risk. These variables interacts and influence customer perceived value in the context of cross channel integration.

Further, the relationship of cross channel integration with brand preference and brand loyalty is influenced by customer perceived value. Also, the relationship of factors of CPV with brand preference and brand loyalty is influenced by customer perceived value.

This leads to the following hypotheses:

> ***Hypothesis 12A-G****: 7 factors of CPV mediates the relationship between cross channel integration and overall customer perceived value*
>
> ***Hypothesis 13A****: CPV mediates the relationship between cross channel integration and brand preference*
>
> ***Hypothesis 13B****: CPV mediates the relationship between cross channel integration and brand loyalty*

Hypothesis 14A-G*: CPV mediated the relationship between 7 factors of CPV and brand preference*

Hypothesis 15A-G*: CPV mediated the relationship between 7 factors of CPV and brand loyalty*

Hypothesis 16*: Brand preference mediates the relationship between CPV and brand loyalty*

4.3.7. The moderating effect

Our model discussed effect of cross channel integration on perceived value and factors of perceived value, which then impacts preference and loyalty in the customer purchase journey. But, the model is incomplete if it does not discusses the influence of cross channel integration during the evaluation phase, decision-making phase while making first purchase, and thereafter. There are large body of studies that has studied various moderating effect, like effect of consumer innovativeness (Adapa et al., 2020) on the relationship between factors of CPV (risk) and CPV; effect of gender (Jayasingh et al., 2022) on the relationship between perceived value and preference; effect of technology readiness (Marthin and Hadiprawoto, 2022), switching cost (Yang and Peterson, 2004), cross-national (Forgas-Coll et al., 2012) on the relationship between perceived value and loyalty. In the same vein, we suggest the following hypotheses:

Hypothesis 17A*: Cross channel integration moderates the relationship between CPV and BP*

***Hypothesis 17B**: Cross channel integration moderates the relationship between CPV and BL*

***Hypothesis 18**: Cross channel integration moderates the relationship between BP and BL*

These relationships are stronger when brands' are at their higher cross channel integration stage

4.3.8. A mediated-moderation model

Taken together, this study proposes that factors of CPV impact perceived value, which in turn develop preference accordingly. At the same time, this study also suggests that a cross channel integration can strengthen the influence of factors of CPV on brand preference. Testing a moderated-mediation model is quite common in similar studies in an Omni channel environment that usually indicate the test as an important contribution. For example, (Le and Nguyen-Le, 2020), through moderated-mediation model examine moderating and mediating effects of customer empowerment and internet usage on the relationship between channel integration quality and their patronage intention via customer experience. In this sense, this study proposes a moderated-mediation model to understand the impacts of factors of CPV and CPV on preference and loyalty, respectively. Specifically, in an attempt to examine the moderated mediation effect of cross channel integration, this study proposes:

***Hypothesis 19A-G**: Cross channel integration moderates the indirect effect of factors of CPV on brand preference via CPV.*

Hypothesis 20A-G*: Cross channel integration moderates the indirect effect of factors of CPV on brand loyalty via CPV.*

Hypothesis 21*: Cross channel integration moderates the indirect effect of CPV on brand loyalty via brand preference.*

These indirect effects are stronger when brands' are at their higher cross channel integration stage.

4.4. Control variables [All the studies]

A body of extant literatures suggest existence of the linear relationships between benefits / sacrifice and perceived value that might be contingent upon consumer characteristics, especially consumer demographics (CD), such as gender age, education, income, and family size (Eisend and Stokburger-Sauer, 2013; Fang et al., 2016; Reham, 2013; Shukla et al., 2013). This suggests the influential abilities of these characteristics in shaping customers' perceived value for the cross channel integrated services offered by the brands and hence shall be controlled during the current study.

As this section has been discussed in details in chapter 1, point no. 1.2.12, we are not repeating here.

4.5. Conclusions

In this chapter, we discussed several theoretical framework and arrived at a model for the research that the study has undertaken. The suggested model in this thesis is expected to address the existing gaps in the literature review, which has been explicitly discussed in chapter 3. This model is based on the theoretical framework of consumer behavior models and brands in the marketing literature. This model is

based on the psychologists' perspective on analyzing consumer behavior and their understanding of consumer brand preferences and brand loyalty, which is an extension of the discussion in chapter 2.

The study has been grounded on the following premises:

1. Cross channel integration is a transformational process and an organization evolve to the upper level or higher phase, gradually
2. In its core, the cross channel integration is essentially a service and hence is the construct that can be handled as any other service offerings
3. We alternately used the terminologies of cross channel integration level of brands or brand omnichannel transformational phase
4. We delimit our studies to the manufacturer-sponsor consumer brands that are essentially operating as a single brand
5. As the study is grounded on the demand-side perspective, several dimensions of the perceived value has been identified from the extant literature and examined to the focal context.
6. Model around the mediating role of the perceived value has been also developed
7. The model was developed, primarily, to examine influence of the cross channel integration on various dimensions of perceived value, covering cognitive, affective, and social values. However, model on moderating influence of the cross channel integration is also developed.
8. Both the consumer behavior dimension of brand preference and brand loyalty has been developed and tested. Experential-view of the brand preference has been taken and the operationalization of brand loyalty is based on both; attitudinal and behavioural.

Chapter Five

Research Methodology

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5.1. Introduction

This chapter presents a comprehensive view of the research paradigm, which includes the epistemological framework incorporated in the theoretical approach. The text also explores the philosophical premise that forms the basis of the research methodology, the research approach that establishes the connection between the research and theory, and the techniques used for gathering and analyzing data. The succeeding sections of this chapter give a comprehensive overview of the intended techniques for conducting the study and ensuring the validity of the findings. Section 5.2 delves into the research philosophy and elucidates the research's stance about the comprehension of reality and the progression of knowledge. Section 5.3 delineates the study strategy through the use of a chart and presents a comprehensive comparison between quantitative and qualitative research. The quantitative study's description is presented in section 5.4. This part provides a comprehensive analysis of the survey design, sampling techniques and procedure, measures, data collection for both industry experts and consumers, pilot testing, and analyzing techniques is provided for the empirical study incorporated in this thesis. Section 5.5 provides a definition of the Delphi technique and offers a detailed description of it.

5.2. The Research Philosophy

Research is the systematic pursuit of information aimed at solving specific problems or addressing particular challenges, with the ultimate goal of enhancing our comprehension of the social environment (Matthews & Ross, 2010). The philosophy pertains to the researcher's viewpoint on reality, including its description, explanation, and its connection to the acquired information (Saunders et al., 2012). Philosophical assumptions encompass a collection of fundamental ideas that shape one's perspective on the world and establish the connection between the world and the researcher. The research paradigm determines the

researcher's understanding of reality, acceptable information, and procedures for doing research in a certain profession or discipline (Bryman & Bell, 2011). The research paradigm may be classified into three primary categories: ontology, epistemology, and methodology (Guba & Lincoln., 1994; Saunders et al., 2012).

Ontology explores the fundamental basis of reality and is divided into two elements based on the involvement of social actors: objectivism and subjectivism. Objectivism asserts that social actors are independent from social phenomena, whereas subjectivism (constructionism) posits that social phenomena are created via interactions between social actors. Epistemology refers to the study of how knowledge is acquired and the understanding of the connection between the researcher and the phenomenon being examined (Saunders et al., 2012). The methodology encompasses the techniques and procedures used to gather and analyze data for the purpose of conducting research (Creswell, 2009).

The fundamental principles of each paradigm are delineated by four philosophical assumptions: positivism, post-positivism, critical theory, and constructivism (Guba & Lincoln., 1994). Table 5.1 depicts the four philosophical assumptions and their related ontological, epistemological, and methodological paradigms.

The positivist perspective, also known as the accepted view, has held sway for the last four centuries (Guba & Lincoln., 1994). The research objective, based on the positivist premise, is to investigate a social phenomena in order to identify patterns and causal links, while accepting the autonomy of social actors. The approach is objective and follows the deductive principle, relying on an established theory to develop a hypothesis that can be tested. Consequently, the researcher obtains knowledge by collecting factual information that contributes to the advancement of the theory (Bryman & Bell, 2011; Saunders et al., 2012).

Table 5.1: Basic beliefs of alternative inquiry paradigms

Item	Positivism	Post-positivism	Critical Theory	Constructivism
Ontology	Naïve realism - "real" reality but apprehendable	Critical realism – "real" reality but only imperfectly and probabilistically apprehendable	Historical realism – virtually reality shaped by social, political, cultural, economic, and gender values; crystallised over time	Relativism – local and specific constructed realities
Epistemology	Dualist/objectivist; findings true	Modified dualist/ objectivist; critical tradition/community; findings probably	Transactional / subjectivist; value – mediated findings	Transactional/subjectivist; created findings
Methodology	Experimental / manipulative; verification of hypotheses; chiefly quantitative	Modified experimental / manipulative; critical multiplism; falsification of hypotheses; may include quantitative methods	Dialogic / dialectical	Hermeneutical / dialectical

Source: Guba and Lincoln (1994)

Post-positivism is a philosophical stance that shares similarities with positivism. However, it addresses the criticisms of positivism and embraces critical realism as its ontological position (Guba & Lincoln., 1994). This philosophical approach posits the presence of reality while acknowledging the variations between things in diverse circumstances. It occupies a crucial position in relation to reality, enabling a more accurate understanding of it. Consequently, it has the potential to bring about modifications that can alter the existing state of affairs (Bryman & Bell, 2011; Guba & Lincoln., 1994). The selection of methods should be appropriate for the topics and may encompass qualitative methodologies (Saunders et al., 2012).

The critical theory presents an alternate approach to positivism. It holds the belief that understanding reality necessitates a unique study methodology that acknowledges the differences among individuals. This method seeks to comprehend human activities by establishing a causal explanation of cause and effect, focusing solely on the influence of social activity rather than external influences. Contrary to the positivist philosophy, this elucidates human behavior using theoretical frameworks (Bryman & Bell, 2011). An interactive interaction exists between the researcher and the subjects being investigated. This research methodology utilizes a qualitative method, which involves conducting in-depth investigations with the persons being investigated. This is done through dialectical discourse to gain a comprehensive understanding of the subjective meanings associated with the topic under investigation (Guba & Lincoln., 1994).

Constructivism is the fourth philosophy. This diverges from the belief in an objective reality (ontological realism) position towards the belief that reality is subjective and relative (ontological relativism). This method aligns with the subjectivism principle of critical theory. Nevertheless, the correlation between the researcher and the subjects is intricately connected to the discoveries. The methods

used to do research are often dialectical and hermeneutical, in contrast to the critical theory associated with the researcher's views (Guba & Lincoln., 1994).

Saunders et al. (2012) propose that rather than seeing these ideologies as distinct perspectives, it is more suitable for researchers to view them as a multidimensional continuum. Nevertheless, the discussion consistently revolved around the selection of either the positivist or interpretivist approach, or the choice between quantitative and qualitative methodologies. Baker and Foy (2008) propose that:

> "*This distinction rests basically on one's personal philosophy concerning the conduct of research with positivists emphasizing an inductive or hypothetico-deductive procedure to establish and explain patterns of behaviour while interpretivists seek to establish the motivations and actions that lead to these patterns of behaviour*" (M. J. Baker & Foy, 2008).

5.2.1. Deductive versus Inductive approach

The choice of research methodology is contingent upon the research problem or topic, which is decided by the link between the theory and the research. The significance of testing or constructing the theory will be determined based on the relationship, the clarity of the hypothesis, and the rationale for gathering the data. Subsequently, the researcher can determine the structure and framework of the research project (Bryman & Bell, 2011).

The relationship between theory and research is defined by two research approaches: deductive and inductive. The deductive technique, often known as the hypothetic-deductive method (M. J. Baker & Foy, 2008), is widely accepted as the prevailing perspective on the connection between research and theory (Bryman & Bell, 2011). This strategy begins by deriving hypotheses from a thorough

examination of the academic literature. The ideas encapsulated in the hypotheses are put into practice and evidence is gathered to quantify them. Through data analysis, the theory can be either rejected, accepted, or modified to provide an explanation for the study inquiry (Bryman & Bell, 2011; Saunders et al., 2012).

The inductive technique is a representation of the logical and practical way in which scientists uncover the reality and construct theories (M. J. Baker & Foy, 2008). Hence, the research starts by gathering empirical evidence pertaining to the phenomena under investigation, with the aim of comprehensively examining it and subsequently formulating a theoretical framework. This method facilitates the engagement of social actors in the interpretation of reality and adheres to a versatile framework. The method involves conducting interviews with a limited number of individuals who work in the specific setting being studied. As a result, there is less emphasis on generalizing the findings to a larger population (Saunders et al., 2012). Hence, the theory itself is a direct outcome of the conducted study (Alan Bryman, 2016).

5.2.2. Justification of the Research approach

The chosen research philosophy method should be pertinent to the study subject or problem at hand. Saunders et al. (2012) argue that it is challenging to align the research issue with one particular philosophical position. Nevertheless, it remains crucial to ascertain the research philosophy to establish the methodology the researcher will employ to obtain solutions to the research inquiries.

The current study aims to examine impact of cross channel integration capabilities of a manufacturer-sponsor consumer brands on demand-side perspective of various elements of perceived value, and overall perceived value, in the context of a retail-value chain or retail-channel structure. Subsequently, this study investigates the

impact of customer perceived characteristics on consumer behavior in terms of brand preference and brand loyalty. In order to achieve this objective, the research utilizes the deductive approach and adheres to its sequential procedures. The process begins with a theoretical framework that encompasses the collective knowledge found in academic literature on marketing, branding, retailing, omnichannel, and consumer behavior. This framework aims to elucidate how consumers develop their perception of cross-channel integration, which in turn influences their preferences and loyalty towards specific brands. The literature serves as the theoretical basis for the proposed model and hypotheses. The model investigates the mediating function of customer perceived value components in the relationship between cross channel integration of manufacturer-sponsor consumer brands and consumer brand preference, as well as brand loyalty. This analysis is based on the theoretical foundations of omnichannel retailing, customer perceived value, consumer behavior, brand building, and branding. The research strictly adheres to a logical method, conducting several investigations using various pathways or models.

Nevertheless, the study employed the Delphi technique of 10 experts and have taken the research through them for a qualitative study to reconfirm the hypotheses and validate the conceptual model.

5.3. Research Design

The research design is a strategic blueprint that outlines the framework of the study and the arrangement of the research activity. It provides an explanation and rationale for the various types and techniques of data collection, the origin of the information, the sampling strategy, and the limitations imposed by time and cost restrictions (Easterby-Smith et al., 2008). The categorization of research design may be accomplished by several means, including the techniques employed for data

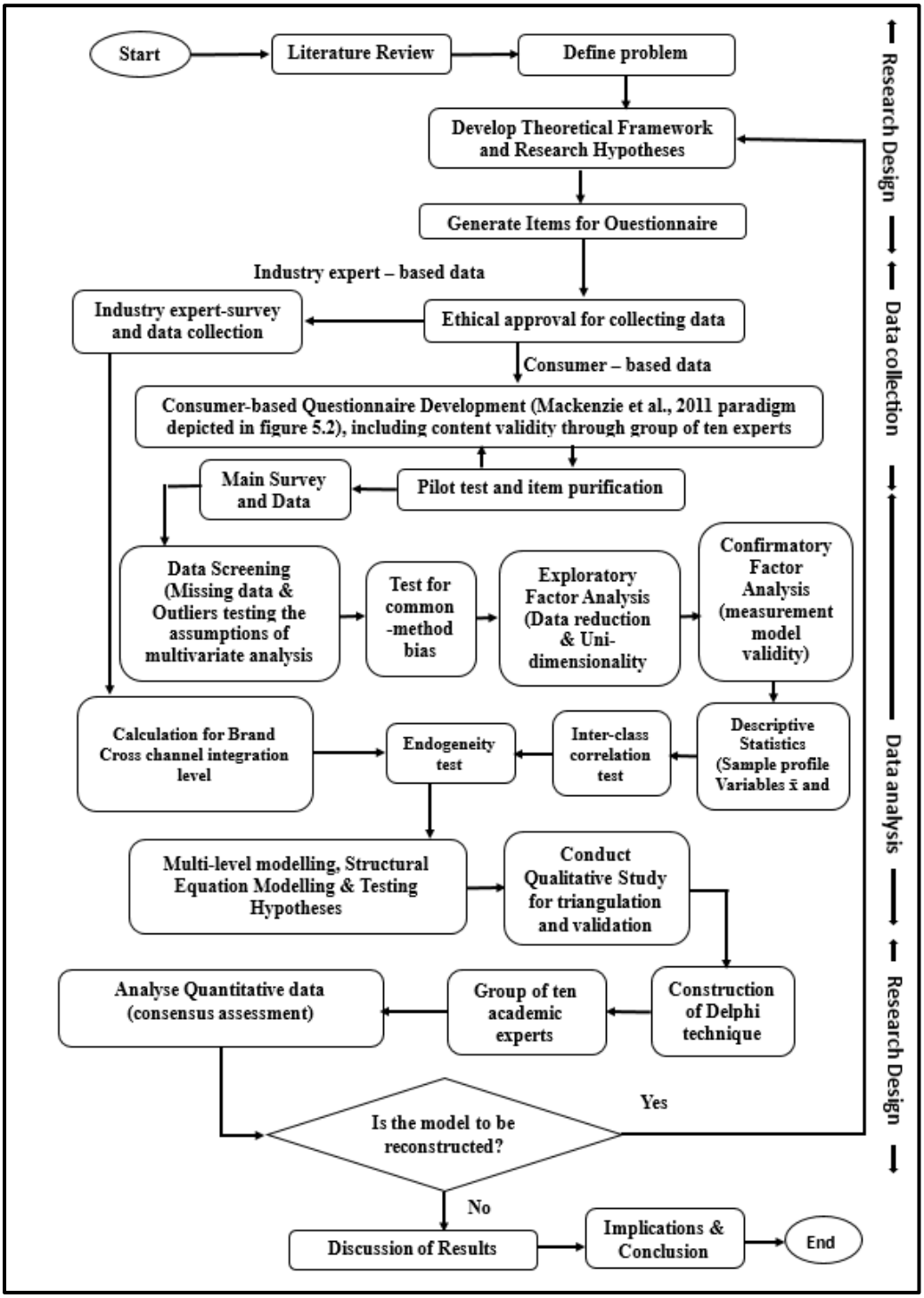
collecting, the temporal aspect, the level of researcher involvement, and the objective of the study (Blumberg et al., 2008). Nevertheless, the categorization that is most commonly employed is the one that is founded on the goal of the study. There are three categories of research design that are determined by the objective of the study: exploratory, descriptive, and causal (Chisnall, 2001).

The exploratory research offers additional understanding and concepts to uncover the true essence of the subject being investigated. Descriptive study is based on existing knowledge and focuses on providing a detailed description of specific events. It serves as a method to achieve a goal (means-to-an-end) rather than being the ultimate objective (end-in-itself), as it promotes future explanations (Chisnall, 2001; Saunders et al., 2012). Causal or explanatory research elucidates the causal connections between variables. These three fundamental designs are interconnected, and the study might encompass several objectives.

The current study is trying to investigate the demand-side consequence of the cross channel integration of the manufacturer-sponsor consumer brands in terms of the customer perceived value, which becomes the determinants of brand preference and brand loyalty, and in turn brand preference impact on brand loyalty. Thus, the study design includes a descriptive-explanatory process that outlines the characteristics of the respondents in a cross-sectional sample survey. This is performed to assess the hypotheses and elucidate the connections between the constructs being studied.

The study employed the Delphi technique of 10 experts and have taken the research through them for a qualitative study to reconfirm the hypotheses and validate the conceptual model. Figure 5.1 shows the research design chart.

Figure 5.1: Research design chart


Start
Literature Review
Define problem
Develop Theoretical Framework and Research Hypotheses
Generate Items for Ouestionnaire
Industry expert – based data
Industry expert-survey and data collection
Ethical approval for collecting data
Consumer – based data
Consumer-based Questionnaire Development (Mackenzie et al., 2011 paradigm depicted in figure 5.2), including content validity through group of ten experts
Main Survey and Data
Pilot test and item purification
Data Screening (Missing data & Outliers testing the assumptions of multivariate analysis
Test for common -method bias
Exploratory Factor Analysis (Data reduction & Uni-dimensionality
Confirmatory Factor Analysis (measurement model validity)
Calculation for Brand Cross channel integration level
Endogeneity test
Inter-class correlation test
Descriptive Statistics (Sample profile Variables x̄ and
Multi-level modelling, Structural Equation Modelling & Testing Hypotheses
Conduct Qualitative Study for triangulation and validation
Analyse Quantitative data (consensus assessment)
Group of ten academic experts
Construction of Delphi technique
Is the model to be reconstructed?
Yes
No
Discussion of Results
Implications & Conclusion
End
Research Design
Data collection
Data analysis
Research Design

5.3.1. Quantitative vs. Qualitative Research

The inquiry into research methodologies follows immediately after establishing the research paradigm and its ontological and epistemological perspective. Every philosophical assumption seeks to address inquiries concerning the ontological and epistemological perspectives of inquiry, as well as its technique. The present study embraces the post-positivism philosophical premise, which takes a critical stance against positivism (P. Eriksson & Kovalainen, 2015). Thus, it embraces the notion that the interpretation of reality is influenced by social individuals and aims to elucidate the research phenomena by employing a modified form of objectivism within the given context. The methodological approach seeks to investigate the meanings and intentions behind the behaviors of elements by studying them in their natural environments (Guba & Lincoln., 1994).

While Guba and Lincoln (1994) established four philosophical views to frame the research paradigm, positivism and interpretivism are the two basic methodological approaches. The research methodology, also known as the philosophy of techniques, provides guidance on how to study the research problem. In general, research methodologies can be categorized into two main types: qualitative and quantitative (P. Eriksson & Kovalainen, 2015). The subsequent table 5.2 provides a vivid depiction of the disparity between the two methodologies.

One might argue that quantitative research is influenced by the philosophical premise of positivism, whereas qualitative research aims to comprehend the perceptions of social actors about their surroundings (A Bryman, 2006). The positivist philosophical assumption often employs a methodological approach that is characterized by a high level of structure, involving the use of large samples and a combination of quantitative and qualitative methodologies. Nevertheless, quantitative approaches are frequently employed. The interpretivism philosophical

assumption relies on utilizing small sample sizes and conducting thorough studies through the use of qualitative methodologies. Alternatively, a mixed or multiple techniques design might be employed (Guba & Lincoln., 1994; Saunders et al., 2012). Quantitative research is linked to the positivist ideology and employs a logical method. It focuses on quantifying data to assess the association among constructs during data collection and analysis. Qualitative research is linked to an interpretative philosophy and an inductive technique. It seeks to explain social phenomena by collecting and analyzing non-numeric data (Saunders et al., 2012).

Table 5.2: The disparities between quantitative and qualitative methodologies

Aspect of comparison	Quantitative	Qualitative
Nature of reality	Objective, social actors-independent	Socially created, subjective
Methodology	Deductive: theory testing	Inductive: theory-building
Design of research	Exploratory	Descriptive
Research strategies	Experimental and survey research using structured interviews.	Qualitative methods include unstructured or semi-structured interviews, case studies, ethnography, grounded theory, and narrative research.
Data type	Number-based	Non-numerical; qualitative
Sample size	A large sample size is needed to extrapolate results.	Small sample size and less generalizability

Qualitative research aims to provide a comprehensive understanding of the study question by using a naturalistic method within specific contextual circumstances (Hoepfl, 1997; Patton, 1990). The focus of this approach is to analyze non-numeric data in order to understand the subjective and socially created meanings of the event being examined (Saunders et al., 2012). Qualitative data allows the researcher to gather in-depth information from the respondents' viewpoints, and to explain their

experiences, emotions, attitudes, preferences, perceptions, and stances (Patton, 1990). Bryman (2006) proposes that this form of research facilitates the comprehension of connections between the variables being studied that are not present in the survey. Furthermore, qualitative research may be employed to elucidate the ideas and get more precise phrasing of the scale questions in order to construct the questionnaire (Bryman, 2006; Churchill, 1995; Silverman, 2006). Nevertheless, qualitative research is sometimes criticized for its subjective nature and the challenge of replicating its findings, as well as its limited generalizability (Bryman and Bell, 2011).

Quantitative research, in contrast to other approaches, is based on the realism perspective. It takes the notions derived from theory and puts them into practice by measuring them (Baker and Foy, 2008). It analyzes the connections between the variables and verifies the hypotheses. Thus, it gives significant importance to numerical data in order to draw findings that may be applied universally (Saunders et al., 2012). Quantitative research is sometimes criticized for its lack of engagement or interaction with the participants, its arbitrary specification of variables that may not be relevant to the context or surroundings, and its failure to produce hypotheses based on the data (Silverman, 2006).

5.4. Quantitative Study

The empirical investigation is carried out by creating accurate and dependable measurements of the constructs of the study, which are derived from the existing literature. Based on these metrics, the study survey will be developed to test the hypotheses.

Quantitative research uses experiments and surveys. Marketing studies examine consumer behavior using experiments such as choice probability (Trenz et al.,

2020), word of mouth (Paula Rodríguez-Torrico et al., 2023), purchase intention (W. J. Kim et al., 2023; Weber & Maier, 2020; X. Yang, 2022), loyalty (Lazaris et al., 2021)) and understanding consumer perceived value and it's factors like perceived value (M. Park & Lennon, 2009; X. Yang, 2022), personalization (W. J. Kim et al., 2023), benefits (Weber & Maier, 2020) in an Omni-channel context. Nevertheless, it is employed for explanatory research in order to investigate the cause and effect relationship between two variables within a controlled environment. The experiment is frequently conducted in controlled laboratory settings, which limits the generalizability of its findings due to a restricted number of factors (Blumberg et al., 2008; Saunders et al., 2012).

A survey is employed for the purpose of conducting exploratory and descriptive research. The quantitative data that has been evaluated can be utilized to test and provide explanations for specific links between variables, as well as generate models based on these associations (Saunders et al., 2012). Multiple research studies in the field of marketing focus on analyzing consumer behavior, such as loyalty (X. Chen, Su, et al., 2022; Mitxel Cotarelo et al., 2021; Omoregie et al., 2019; Rehman et al., 2022), website loyalty (X. Chen, Sun, et al., 2022), electronic loyalty (Khoa & Huynh, 2023), e-loyalty (Jung Hwan Kim et al., 2009), online loyalty (Y. Li, Liu, Huang, et al., 2018), retail store loyalty (Adapa et al., 2020), attitudinal loyalty (Mainardes et al., 2020) and understanding consumer perceived value and it's factors, such as functional value (Rakhmanita et al., 2023), utilitarian, and hedonic value (Y. Chen & Chi, 2021; Gan & Wang, 2017; Jackson & Xu, 2022; J. Yoo & Park, 2016), convenience (Holmes et al., 2012; Amit Shankar, 2021), trust (Frasquet et al., 2017; Mishra et al., 2023; Sombultawee & Wattanatorn, 2022) in an Omni-channel context.

To achieve the goals of the study, a cross-sectional survey methodology is used to collect data, which involves the collection of quantifiable data from several cases at a single moment in time, allowing for the examination of patterns of relationships among multiple constructs (Bryman & Bell, 2011). Various methodologies are employed to carry out surveys, including structured observations and questionnaires. Nevertheless, the questionnaire is a widely used method for conducting surveys, since it is well-suited for both descriptive and analytical research (Saunders et al., 2012).

5.4.1. Survey Design and Questionnaire Development

The study encompasses one brand-level measure (cross channel integration level), and eleven consumer-level measures such as awareness, convenience, trust, control, risk, ubiquitous personalization, seamless experience, overall customer perceived value, brand preference, brand loyalty, and customer demographics.

As there are two sets of measurement tools and two different waves by which the data is collected, the process adopted shall differ.

5.4.2. Survey Design and Questionnaire Development for consumer-oriented data

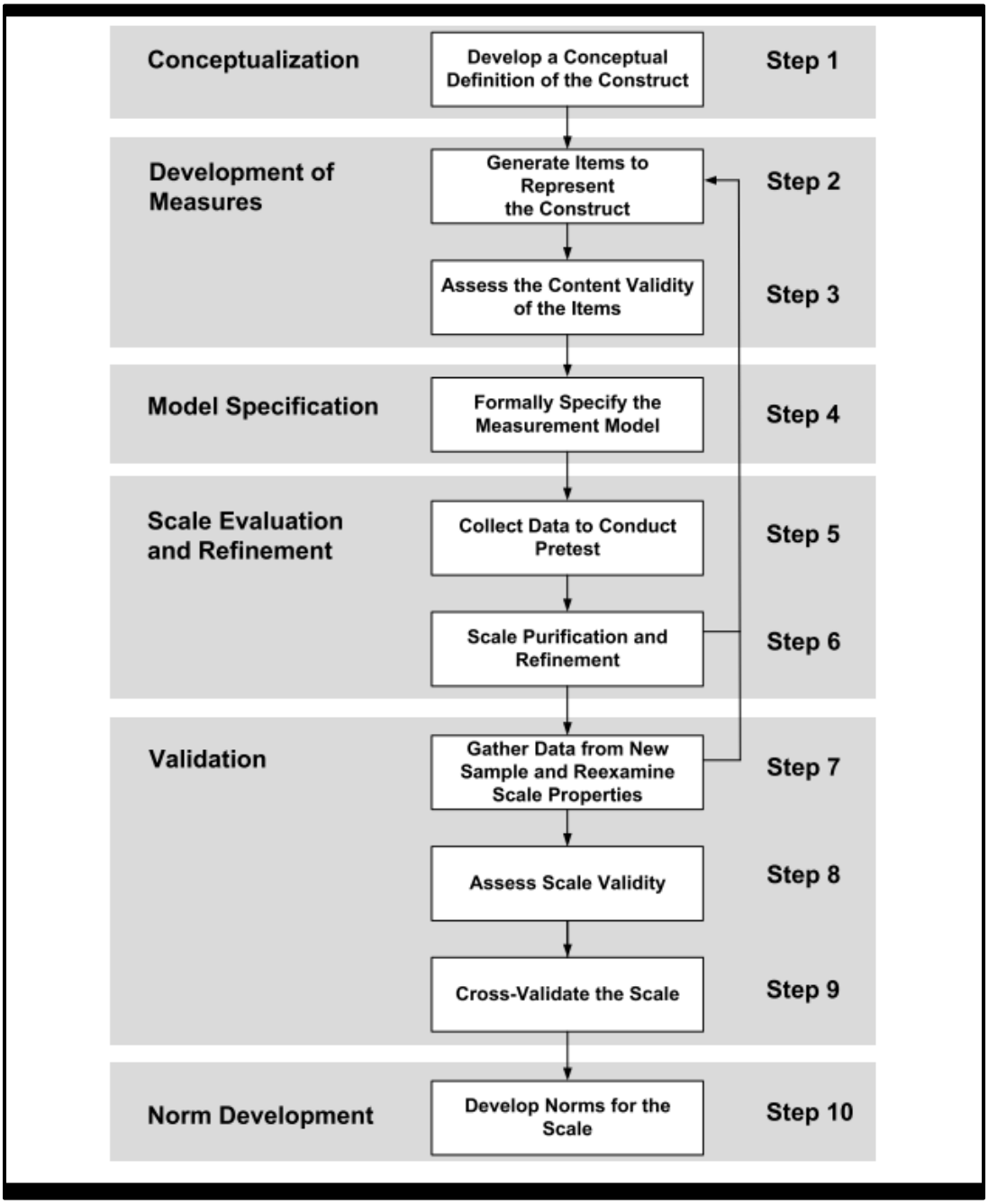
When creating a questionnaire, it is important to address some essential elements in order to collect true response (Chisnall, 2001). Initially, the researcher must ascertain the specific kind of information that is required to be addressed through the questionnaire. The study hypotheses serve as a guiding framework for the questionnaire, determining the specific factors that define the connection being studied, as well as the sort of questions to be asked and the target respondents (Churchill, 1995). Furthermore, the formulation of the questions should include uncomplicated language and commonly used terms that are directly relevant to the

subject under investigation. The questions should be concise and avoid imposing any burden on the respondents' recollection. According to Chisnall (2001), respondents are more likely to answer a questionnaire if its design is straightforward.

The present study adopts the methodology of MacKenzie et al. (2011), which is an extension of the model of Churchill (1995; 1979) in order to construct the questionnaire. MacKenzie et al. (2011) paradigm, as seen in Figure 5.2, suggests that the initial stage involves defining and specifying the domain of conceptions by conducting a literature study. The proposed model consists of 39 hypotheses that investigate the relationship between eleven consumer-oriented constructs: awareness, convenience, trust, control, risk, ubiquitous personalization, seamless experience, overall customer perceived value, brand preference, brand loyalty, and customer demographics. The proposed model in the study consists of 23 hypotheses that investigate the connections between seven consumer-oriented constructs: quality, emotional response, convenience (non-monetary price), reputation, brand preference, brand loyalty, and customer demographics. These structures need to be converted into actionable items. This constructs will have to be translated into the operational items so that the measurement can happen for further analyzing and testing.

5.4.2.1. Specification and Operationalization of constructs on consumer-oriented constructs

Figure 5.2: Scale development procedure, Source: MacKenzie et al. (2011)



The initial stage of the MacKenzie et al. (2011) paradigm involves precisely defining the domain of constructs and clearly outlining the specific meaning of the construct that has to be assessed, termed as a conceptualization step. Subsequently, to generate items that represent the construct to capture the specified domain (MacKenzie et al., 2011). The initial two phases involve the process of conceptualization and operationalization. The term "concept" refers to the framework used to structure the primary characteristics of a construct (Bryman and Bell, 2011). Conceptualisation is the act of clearly defining the construct (Churchill, 1995; Mackenzie et al., 2011). Operationalization is the process of translating concepts into indicators for empirical measurement (Saunders et al., 2012). To build more effective measurements, it is necessary to extensively review the literature to assess each aspect and dimension of multi-dimensional constructs. We now discuss operationalization of each construct in the proposed conceptual framework pertaining to the study.

5.4.2.1.1. Awareness:

Awareness may be measured using a range of methodologies, which can be categorized into two primary approaches: survey data-based approaches and behavioral data-based approaches. The former strategy is often employed, but the latter has a restricted range of implementation (Decker & Trusov, 2010).

The questions assess customer awanress using either a ranking or rating scale. The ranking process involves soliciting people to rank their awareness of different brands. One way to evaluate brands is by distributing points among studied brands based on previous studies (e.g., Niedrich & Swain, 2003, 2008). Another approach is to rank the brands in order of awareness, from the most aware to the least aware (Hughes, 1976; Ross, 1971). The ranking question is analyzed using Mplus (Maydeu-Olivares and Bockenholt, 2005), a statistical tool that employs structural

equation modeling (SEM) for complicated applications requiring several units of analysis within the same model (Hair et al., 2006). The quantitative data for this study is analyzed using AMOS, a versatile application that utilizes a graphical interface instead of syntactic instructions or computer code. Also, Mplus and SPSS statistical toosl were employed.

Thus, this study relies on a survey data-based methodology, employing online questionnaires during personal interaction and a seven-point Likert scale, ranging from 1 = "strongly disagree" to 7 = "strongly agree", to assess awareness, . We adapted instruments developed by Aaker (1996), Keller (1993) Yoo and Donthu (2001), Kim and Hyun (2011), Rossiter and Bellman (2005), Lu et al., 2014, Barreda et al., 2015, Molinillo et al., 2017, Godey et al. (2016), Tariq et al., (2017), and Puwirat and Tripopsakul (2019) that measures consumer's brand recall or brand recognition, referred as brand awareness. The construct is operationalized by referring it as a consumer's ability to recall and recognition the brand due to its presence in both channels; online and offline.

In accordance with Aaker (1996), Keller (1993), Yoo and Donthu (2001), and Molinillo (2016), six-items considered are; CPV-BA1:I am always aware of this brand through my exposure to their various channels (Online & Offline), CPV-BA2:Characteristics of this brand come to my mind quickly when I encounter it through various channels (Online & Offline), CPV-BA3:When it comes to (product or service offered by this brand), I can immediately recall the brand, CPV-BA4:I can recognize this brand among other competing brands, CPV-BA5:I can quickly recall the symbol or logo of this brand, CPV-BA6:I am aware that the brand is present across channel (Online & Offline)

5.4.2.1.2. *Trust*

Brand trust refers to the extent to which the average customer is willing to have confidence in the brand's ability to fulfill its purpose (Chaudhuri and Holbrook, 2001) across different channels, based on their perception of the brand's competence, compassion, and integrity (Komiak and Benbasat, 2006).

In accordance with Schramm-Klein et al. (2011), Frasquet and Miquel (2017), the three-item scale used are; CPV-T1:I feel safe in my transactions with the brand on any individual channel, CPV-T2:I would trust online & offline shopping with the brand, CPV-T3:I trust the brand to keep my personal information safe

5.4.2.1.3. *Risk*

In accordance with Glover and Benbasat (2010), the four-item differential scale used are; CPV-R1:I would suffer a loss when I transact with this brand (Improbable…Probable), CPV-R2:I would suffer a loss when I transact with this brand (Rare…Frequent), CPV-R3:The loss I could suffer when I transact with this brand would be (Insignificant to me…Significant to me), CPV-R4: The loss I could suffer when I transact with this brand would be (Meaningless to me…Meaningful to me).

5.4.2.1.4. *Convenience*

In accordance with Seiders et al., (2007), and Trenz et al. (2020), we employed following seven-item scale to access customer convenience in an OMC environment; CPV-C1:It takes very little time to complete transaction of any nature with this brand during complete or part of purchase journey, CPV-C2:I can receive the product and service as soon as possible while transacting with this brand, CPV-C3:I get information, products and services, and resolution to the problems at fastest possible pace, CPV-C4:It is not strenuous to complete transaction of any nature with this brand and get the product & service, CPV-C5:This brand is an easy-

to-deal with organization, CPV-C6:This brand allows flexibility during purchase journey, CPV-C7:I can decide how I want to interact with the brand in my purchase journey

5.4.2.1.5. *Control*

Esmark et al., 2016, has categorized the construct into three types - behavioral, cognitive, and decisional based on the customer (a) perception of what he can do, (b) interpretation of the situation based on the information accessibility, & (c) given access to choice of channel to select from, respectively during their purchase journey.

We adapted instruments developed by Esmark et al., 2016, that comprise the following eight-item; CPV-Cont1:Completing the purchase journey in-full or part using various channel of the brand, in any sequence or order was entirely within my control, CPV-Cont2:I had to follow a set procedure to use this brand's channel service for my needs, CPV-Cont3:I believe there was sufficient information provided to help me by the brand's all across channels, CPV-Cont4:I believe there was information provided that helped me find everything I needed to carrying out my activity in purchase journey, CPV-Cont5:There were clear directions provided through various integrated channels of the brand for me to help during my purchase journey, CPV-Cont6:I believe I had a lot of choice as to which combination of channels to use for carrying out my purchase journey, CPV-Cont7:I had a great deal of choice in which combination of channels to use for my purchase journey, CPV-Cont8:I believe I was given the option of channels to choose from during my purchase journey

5.4.2.1.6. *Ubiquitous personalization*

Ubiquitous personalization refers to a creation or adjustment or combination of a channel service that fits into the individual requirements all across varied brand's channels during purchase journey of a customer (Ball et al., 2006). It includes the notion of entirely individualized 'synergized-channel services', as well as “mass customized” present across varied brand's channel services (Pine and Gilmore, 1998).

We adapt instruments developed by Ball et al., 2006, Pine and Gilmore, 1998 and employed following two-item scale; CPV-UP1:The brand offers me the kind of channel service that smooth transition across it is possible to satisfy my specific needs during my purchase journey, CPV-UP2:The brand offers me the kind of smooth-transitioning channel services that I couldn’t find with another brand.

5.4.2.1.7. *Seamless experience*

Brakus et al. (2009) defines brand experience as the subjective and internal consumer responses, including sensations, thoughts, and cognitions, as well as the behavioral responses that are generated by brand-related stimuli. These stimuli might include elements such as the brand's design and identity, packaging, communications, and environment.

We adapted instruments developed by Eaglen (2013), and Zarantonello and Schmitt (2010), and employed following six-item scale; CPV-SE1:During my purchase journey with the brand, I can move freely across its various channels, CPV-SE2:I find this brand interesting in a sensory way, CPV-SE3:This brand makes a strong impression on my visual sense or other senses, CPV-SE4:This brand induces feelings and sentiments, CPV-SE5: This brand is an emotional brand, CPV-SE6:I engage in a lot of thinking when I encounter this brand.

5.4.2.1.8. *Overall customer perceived value*

The term used to describe this is the consumer's holistic evaluation of the usefulness of a product, which is determined by their judgments of what they receive and what they provide in return (V. A. Zeithaml, 1988).

In accordance with Steenkamp and Geyskens (2017), Holbrook (1999), we adopted following three-item scale; CPV1:Taken everything together, I consider brand's cross channel integrated service useful, CPV2:Cross channel integration services I get from brand are excellent value , CPV3:The overall value I get from the Cross channel integration services is worth my money and effort

5.4.2.1.9. Brand preference

Aaker (1996), Ebrahim et al., 2016, Keller (1993), and Shankar et al., 2008, having referred the construct as the collection of brand assets and liabilities associated with a brand, as well as a customer's subjective and intangible evaluation of the brand, which goes beyond its objectively observed value.

In accordance with (Aaker, 1996; Ebrahim et al., 2016; Keller, 1993), we adopted the following four items; BP1:I feel that this brand is appealing to me, BP2:I like this brand more than any other brand in the product category, BP3:This brand is my preferred brand over any other brand in the product category, BP4:When it comes to making a purchase, this brand is my first preference in the product category

5.4.2.1.10. Brand loyalty

Covering both, attitudinal and behavioural components, Oliver's (1999) outlined four stages of loyalty: (1) customers develop favorable perceptions of the information offered by a brand, (2) develop a preference for the brand, (3) exhibit

behavioral intentions towards the brand, and (4) ultimately translate these intentions into real behaviors.

In accordance with Oliver's (1999), Leckie et al., 2017, the five items adopted are; BL1:I prefer to purchase this brand to other brands, BL2:I like the brand, BL3:I intend to continue buying this brand, BL4:Overall, this brand will be my first choice, BL5:I will recommend this brand to other people.

5.4.2.1.11. Control variables

Linear relationships between benefits/sacrifice and perceived value might be contingent upon consumer characteristics (demographics), such as gender age, education, income, and family size (R. S. Ebrahim, 2013; Eisend & Stokburger-Sauer, 2013; Fang et al., 2016; Shukla et al., 2013). This suggests the influential abilities of these characteristics in shaping customer perceived value for the cross channel integrated services offered by the brands and hence shall be controlled during the current study.

In accordance with Eisend and Stokburger-Sauer (Eisend & Stokburger-Sauer, 2013), Fang et al., 2016, and Shukla et al., 2013, we employed following five-item scale; CV-CD1:Age, CV-CD2:Education, CV-CD3:Gender, CV-CD4:Income, CV-CD5:Family size.

The completed survey consists of 53 items that encompass 11 underlying factors. The measurement items, together with their original sources, are listed in Table 5.3.

Table 5.3: Measurement Items for Latent Constructs

Construct	Questions	Authors
Brand Awareness	**CPV-BA1: I am always aware of this brand through my exposure to their various channels (Online & Offline)**	Aaker (1996), Keller (1993) Yoo and Donthu (2001), Kim and Hyun (2011), Rossiter and Bellman (2005), Lu et al., 2014, Barreda et al., 2015, Molinillo et al., 2017, Godey et al. (2016), Tariq et al., (2017), and Puwirat and Tripopsakul (2019)
	CPV-BA2: Characteristics of this brand come to my mind quickly when I encounter it through various channels (Online & Offline)	
	CPV-BA3: When it comes to (product or service offered by this brand), I can immediately recall the brand.	
	CPV-BA4: I can recognize this brand among other competing brands	
	CPV-BA5: I can quickly recall the symbol or logo of this brand	
	CPV-BA6: I am aware that the brand is present across channel (Online & Offline)	
Trust	CPV-T1: I feel safe in my transactions with the brand on any individual channel	Ribbink et al. (2004), Christodoulides et al. (2006), Schramm-Klein et al. (2011), Selnes (1998), Sirdeshmukh et al. (2002), Frasquet and Miquel (2017)
	CPV-T2: I would trust online & offline shopping with the brand	
	CPV-T3: I trust the brand to keep my personal information safe	
Risk	**Risk Likelihood (based on** (Glover & Benbasat, 2010) CPV-R1: I would suffer a loss when I transact with this brand (Improbable … Probable).* CPV-R2: I would suffer a loss when I transact with this brand (Rare … Frequent).* **Risk Severity (based on Glover & Benbasat, 2010)**	Pavlou and Gefen, 2004; David Gefen & Pavlou, 2004; P. Pavlou and Liang, 2007; Gefen et al., 2003; Crespo et al., 2009; Miyazaki and Fernandez, 2001; (Mauldin & Arunachalam, 2002; Featherman & Pavlou, 2003;

	CPV-R3: The loss I could suffer when I transact with this brand would be (Insignificant to me … Significant to me).* CPV-R4: The loss I could suffer when I transact with this brand would be (Meaningless to me … Meaningful to me).* *Differential scale to be employed to choose between the alternative risk assessments.	Spiekermann & Paraschiv, 2002; Grazioli & Jarvenpaa, 2000; Jarvenpaa et al., 2000; Kimery and McCord, 2002; arvenpaa and Todd, 1996; Gefen et al., 2008, Pavlou, 2003,
Convenience	**Speed Convenience across brands' channels (based on Seiders et al. 2007)** CPV-C1: It takes very little time to complete transaction of any nature with this brand during complete or part of purchase journey. CPV-C2: I can receive the product and service as soon as possible while transacting with this brand CPV-C3: I get information, products and services, and resolution to the problems at fastest possible pace	Trenz et al., 2020, Seiders et al., (2007), and Childers et al., 2001
	Effort Convenience across brands' channels (based on Seiders et al. 2007) CPV-C4: It is not strenuous to complete transaction of any nature with this brand and get the product & service.	
	Flexibility Convenience (based on Childers et al. 2001) CPV-C5: This brand is a easy-to-deal with organization CPV-C6: This brand allows flexibility during purchase journey CPV-C7: I can decide how I want to interact with the brand in my purchase journey	
Perceived Control	CPV-Cont1: Completing the purchase journey in-full or part using various channel of the brand, in any sequence or order was entirely within my control	Esmark et al., 2016

	CPV-Cont2: I had to follow a set procedure to use this brand's channel service for my needs	
	CPV-Cont3: I believe there was sufficient information provided to help me by the brand's all across channels CPV-Cont4: I believe there was information provided that helped me find everything I needed to carrying out my activity in purchase journey CPV-Cont5: There were clear directions provided through various integrated channels of the brand for me to help during my purchase journey	
	CPV-Cont6: I believe I had a lot of choice as to which combination of channels to use for carrying out my purchase journey CPV-Cont7: I had a great deal of choice in which combination of channels to use for my purchase journey CPV-Cont8: I believe I was given the option of channels to choose from during my purchase journey	
Ubiquitous Personalization	CPV-UP1: The brand offers me the kind of channel service that smooth transition across it is possible to satisfy my specific needs during my purchase journey CPV-UP2: The brand offers me the kind of smooth-transitioning channel services that I couldn't find with another brand	Ball et al., 2006, Pine and Gilmore, 1998
Seamless Experience	CPV-SE1: During my purchase journey with the brand, I can move freely across its various channels	Eaglen (2013)
	Sensory brand experiences: CPV-SE2: I find this brand interesting in a sensory way CPV-SE3: This brand makes a strong impression on my visual sense or other senses	Zarantonello and Schmitt (2010)

	Affective brand experiences: CPV-SE4: This brand induces feelings and sentiments CPV-SE5: This brand is an emotional brand	
	Intellectual brand experiences: CPV-SE6: I engage in a lot of thinking when I encounter this brand	
Brand Preference	BP1: I feel that this brand is appealing to me BP2: I like this brand more than any other brand in the product category BP3: This brand is my preferred brand over any other brand in the product category BP4: When it comes to making a purchase, this brand is my first preference in the product category	Aaker (1996), Ebrahim et al., 2016, Keller (1993), and Shankar et al., 2008
Brand Loyalty	BL1: I prefer to purchase this brand to other brands. BL2: I like the brand BL3: I intend to continue buying this brand. BL4: Overall, this brand will be my first choice. BL5: I will recommend this brand to other people	Oliver's (1999), Lin et al., 2017, Leckie et al., 2017
Customer Perceived Value	CPV1: Taken everything together, I consider brand's cross channel integrated service useful CPV2:Cross channel integration services I get from brand are excellent value CPV3:The overall value I get from the Cross channel integration services is worth my money and effort	Steenkamp and Geyskens (2017), Parasuraman et al., 2005, Sirdeshmukh et al., 2002, Holbrook (1999), Chen and Wells (1999), Leckie et al., 2017
Consumer demographics (CD) / Control variables	CV-CD1: Age, CV-CD2: Education, CV-CD3: Gender, CV-CD4: Income, CV-CD5: Family size	Eisend & Stokburger-Sauer, 2013, Fang et al., 2016; Reham, 2013, Shukla et al., 2013

5.4.3. Survey Design and Questionnaire Development for expert-oriented data

We adopted 27-item scale as provided by Cao and Li, 2015 to assess the brand cross channel integration level to determine its evolutionary phase at the time of the measurement. Each measurement item corresponds to a specific stage (as per table 5.4), including; phase-4 (alignment of assortment, loyal program, price, promotion, and services; integration of database of clients, information systems, logistics, and merchandise planning system across channel; centralized call center service; incentive system linked to both online and off line sales; changing organizational structure for adapting to the integration of different channels; recruiting talents with double competences in retail and digital commerce; and sharing knowledge across channel), phase-3 (access to online inventory and online orders fulfilled by staff in-store, all owing online consumers to browse the inventory in-store, buy online and return in-store, click and pick-up in-store, click-to-call, and linkage between mobile app and store), phase-2 (align marketing message, and integrated marketing communication across channel), phase-1 (different assortment & pricing policies, different brand & service in different channel, Presence in different channels - website, catalog, kiosks , mobile, social media, call center).

Table 5.4: Cross channel integration level measure items

Question	Level / Stage
Align assortment across channel	4
Align loyal program across channel	
Align price across channel	
Align promotion across channel	
Align services across channel	
Centralized call center service across channel	
Changing organizational structure for adapting to the integration of different channels	
Incentive system linked to both online and off line sales	
Integration of database of clients across channel	

Integration of information systems across channel	
Integration of logistics across channel	
Integration of merchandise planning system across channel	
Recruiting talents with double competences in retail and digital commerce	
Sharing knowledge across channel	
Access to online inventory and online orders fulfilled by staff in-store	3
All owing online consumers to browse the inventory in-store	
Buy online and return in-store	
Click and pick-up in-store	
Click-to-call	
Linkage between mobile app and store	
Align marketing message across channel	2
Integrated marketing communication across channel	
Different assortment policies in different channel	1
Different brand in different channel	
Different price policies in different channel	
Different service in different channel	
Presence in different channels (website, catalog, kiosks , mobile, social media, call centre)	

The scale was transformed into a survey questionnaire for industry experts, with customized questionnaires for individual brands and industries to clarify focal-brand names. Illustration of such questionnaire is provided in the Table 5.5.

Table 5.5: Questionnaire administered to the industry expert for measuring CCI

S/n	Name of the Expert	OTP
1	Does 'Raymond' Apparel & Fashion has presence in different channels (website, catalog, kiosks, mobile, social media, call center)?	1
2	Does 'Raymond' Apparel & Fashion has different assortment policies in different channels?	1
3	Does 'Raymond' Apparel & Fashion has different brand names in different channels?	1
4	Does 'Raymond' Apparel & Fashion has different price policies in different channels?	1
5	Does 'Raymond' Apparel & Fashion provides different kinds of service in different channels?	1

6	Does 'Raymond' Apparel & Fashion aligns marketing message across channels?	2
7	Does 'Raymond' Apparel & Fashion has integrated marketing communication across channels?	2
8	Does 'Raymond' Apparel & Fashion provide access to online inventory and does online orders fulfilled by staff in-store?	3
9	Does 'Raymond' Apparel & Fashion allows online consumers to browse the inventory in-store?	3
10	Does 'Raymond' Apparel & Fashion allows buying online and return in-store?	3
11	Does 'Raymond' Apparel & Fashion allows click and pick-up in-store?	3
12	Does 'Raymond' Apparel & Fashion allows click-to-call?	3
13	Does 'Raymond' Apparel & Fashion allows linkage between mobile app and store?	3
14	Does 'Raymond' Apparel & Fashion aligns assortment across channels?	4
15	Does 'Raymond' Apparel & Fashion aligns loyalty program across channels?	4
16	Does 'Raymond' Apparel & Fashion aligns price across channels?	4
17	Does 'Raymond' Apparel & Fashion aligns sales promotion across channels?	4
18	Does 'Raymond' Apparel & Fashion aligns services across channels?	4
19	Does 'Raymond' Apparel & Fashion has centralized call center service across channels?	4
20	Does 'Raymond' Apparel & Fashion support and encourage changing organizational structure for adapting to the integration of different channels?	4
21	Does 'Raymond' Apparel & Fashion links incentive system to both online and offline sales?	4
22	Does 'Raymond' Apparel & Fashion integrates database of clients across channels?	4
23	Does 'Raymond' Apparel & Fashion integrates information systems across channels?	4
24	Does 'Raymond' Apparel & Fashion integrates logistics across channels?	4
25	Does 'Raymond' Apparel & Fashion integrates merchandise planning system across channels?	4
26	Does 'Raymond' Apparel & Fashion recruits talents with double competences in retail and digital commerce?	4
27	Does 'Raymond' Apparel & Fashion share knowledge across channels?	4

CCI was computed for each focal brand, illustration of such calculation is provided in the Table 5.6 wherein the ordinal variable of CCI (1-4) was converted into an

interval in the regression test (Cao and Li, 2015), which were then used for further analysis:

CCI is computed for each and every focal brands as per the following procedure and sample calculation in provided in the below table:

1. First, “weights” are assigned to each and every items in the questionnaire based on their OTP. For example, “Does 'Apple' mobiles has integrated marketing communication across channels?” is assigned as ‘2’, “Does 'Apple' mobiles integrates merchandise planning system across channels?” is assigned ‘4’.
2. Second, “responses” termed as “score” on each of these 27 items for each brands are obtained through evaluations done by three or more industry experts on a 7-point Likert scale. In our illustration, five experts have evaluated the brand and each provided scores for all the 27 items.
3. Third, from these “responses”, “Average” of these “scores” are computed for each assigned “weights”. In this illustration, average scores obtained by OTP-1 through 4 are 3.76, 5.4, 4.47, and 5.81, respectively, with that of OTP-4 is highest (5.81).
4. Fourth, brand is considered to be in that phase for which average of these scores are maximum.

In our case OTP-4. CCI is computed by multiplying this average score (5.81) with the weights (4), which is equal to 23.26 in our case.

Table 5.6: Sample calculation of CCI

Items	Expert_1	Expert_2	Expert_3	Expert_4	Expert_5	Average score	OTP
1	7	5	7	7	5.00	6.20	1
2	6	5	7	2	2.00	4.40	1
3	1	1	7	1	1.00	2.20	1
4	2	4	2	2	5.00	3.00	1

5	2	1	2	6	4.00	3.00	1
6	6	1	7	6	7.00	5.40	2
7	6	1	7	6	7.00	5.40	2
8	4	2	7	6	7.00	5.20	3
9	4	1	7	6	6.00	4.80	3
10	4	1	7	6	4.00	4.40	3
11	4	1	7	6	4.00	4.40	3
12	6	1	4	6	1.00	3.60	3
13	4	1	7	6	4.00	4.40	3
14	6	3	7	6	4.00	5.20	4
15	6	4	7	6	4.00	5.40	4
16	6	2	7	6	6.00	5.40	4
17	6	5	7	6	7.00	6.20	4
18	6	7	7	6	7.00	6.60	4
19	6	7	7	6	7.00	6.60	4
20	5	5	7	6	6.00	5.80	4
21	4	4	7	6	6.00	5.40	4
22	6	7	7	6	6.00	6.40	4
23	6	7	7	6	7.00	6.60	4
24	6	4	4	6	7.00	5.40	4
25	6	7	4	6	7.00	6.00	4
26	4	1	4	6	7.00	4.40	4
27	6	5	7	6	6.00	6.00	4

Table 5.7: Final score on CCI

OTP	Average Score	Maximum of Average Score	Phase_Maximum Score	CCI
1	3.76	5.81	4.00	23.26
2	5.40			
3	4.47			
4	5.81			

5.4.4. Types of questionnaire and scale

The categorization of questionnaires may be ascertained based on the mode of communication (Churchill, 1995), which can be classified into three types: self-administered questionnaires, personal interviews, and telephone interviews

(Blumberg et al., 2008). The self-administered questionnaires can be distributed through various methods, including electronic delivery (web-based questionnaires), postal delivery (mail questionnaires), face-to-face interaction in public places like shopping malls (intercept or mall questionnaires), or hand-delivered and collected at a later time (delivery and collection questionnaires) (Blumberg et al., 2008; Churchill, 1995; Saunders et al., 2012). The telephone questionnaire is administered either by a phone call (Churchill, 1995) or computer-assisted telephone interviewing (Chisnall, 2001). Personal interviews involve direct, in-person discussions between the researcher and the interviewee (Churchill, 1995). Through a comparison of questionnaire forms, it was determined that telephone interviews are expensive and have restrictions on their duration (Blumberg et al., 2008). Personal interviews have the potential to provide a high response rate, but they also come with a significant expense and necessitate the presence of skilled interviewers (Saunders et al., 2012). Furthermore, both personal and telephone interviews are susceptible to the influence of interviewer bias (Churchill, 1995). On the other hand, self-administered surveys are typically inexpensive and do not need the researcher's participation (Blumberg et al., 2008).

There are several techniques available for delivering self-administered surveys to participants. A mail survey necessitates a significant amount of time for receiving replies (Churchill, 1995). Furthermore, the postal service in India is characterized by a lack of efficiency and precision. Furthermore, utilizing the internet or email to distribute the surveys will restrict the participants to individuals who have access to the internet. The intercept or mall questionnaire is also one of the options to utilize for mobilizing responses.

Nevertheless, in our study participants were recruited from various sources and geographic locations, including an online consumer panel through a certified

market research firm and author's network that includes various organization employees, school/colleges staffs, personal network, and social media connects. Most of the participants recruited were a combination of a personal, and professional network, including usage of a social media platform for recruiting unknown participants in India. Participants includes school teachers and administration-staffs, colleges professors, administrative-staffs, and in some cases students from the post-graduate programs. The use of a broad consumer panel was chosen to account for the influence of demographic factors on regressand (Ansari et al., 2008). The sampling frame was limited to internet users, as they represent potential online channel buyers and are more likely to be impacted by OMC. Consumers without internet access were excluded from the sampling process. Though multiple sources were deployed for mobililzation of responses, it was all collected durng the personal interaction when the briefing were provided to the potential respondents by displaying the image of the brand for which the questionnaire were issued. Also, customized questionnaire were issued for all the various brands so that the respondents are continuously reminded of the brands for which the question is set and answers, sort.

Marketing research commonly employs many types of scales, including the Thurstone scale, Likert scale, Semantic differential scale, and Guttman scale (Chisnall, 2001). The Thurstone scale is an established interval scale that necessitates advanced mathematical skills. The Guttman scale is a cumulative scale that allows respondents to express their agreement with many claims. However, it is a complex scale and might provide challenges in terms of validation. The Osgood semantic scale and Likert scale are the two most popular, user-friendly, and dependable scales (Chisnall, 2001).

Churchill (1995) demonstrates that in the field of marketing, the utilization of semantic differential scales has been adapted to align with the Likert scale instead of the Semantic scale design. Consequently, doubts have been raised regarding its legitimacy. The Osgood scale is employed to examine customer perception of brand image and corporate image (Chisnall, 2001). Aaker (1997) recommends using the Likert scale instead of the Semantic scale. The Likert scale assesses the degree to which a brand can be described using specific human characteristics, such as brand personality content and strength. In contrast, the Semantic scale focuses on determining whether brands are associated with negative or positive personality traits, known as brand personality valence. Furthermore, participants consistently find it more convenient to answer questions utilizing the Likert scale (Churchill, 1995).

The present study used the Likert scale due to these reasons. The Likert scale typically consists of four to seven points (Saunders et al., 2012). The four points compel the respondents to articulate their attitude or emotions, but the seven points provide respondents with the opportunity to express uncertainty on an implied negative remark. Furthermore, the seven points exhibit greater clarity in their visual presentation. The Likert seven-point scale is employed based on these criteria.

5.4.5. Language

Language, as per the definition, is the systematic and traditional technique of human communication, encompassing both spoken and written forms that involve the use of words. Usunier (1998) demonstrates that language serves as the medium via which individuals engage in social interaction, perceive and articulate their surroundings, and generate mental concepts that are then employed for making evaluations. Furthermore, language plays a crucial role in culture and should be taken into account when doing research. It is crucial to take into account that the

language used should be appropriate for the cultural context being examined (Usunier, 1998).

Given that this study is being carried out in India and involves Indian participants, it is necessary for the questionnaire to be in the native language of India. But, as India is a diverse nation with multiple languages spoken it is not feasible to translate the questionnaire into multiple languages. Further, in the today India (Bharat), getting responses in English in India is generally not an issue due to several factors:
1. Historical Influence: English has been widely spoken in India since the British colonial period. It was the medium of instruction in schools and universities during British rule, and it has continued to be a prominent language in education and administration even today.

2. Official Status: English is one of the two official languages of the Indian government, the other being Hindi. It is used extensively in government, judiciary, business, and education.

3. Education System: English is a compulsory subject in schools, and many schools use English as the primary medium of instruction. This ensures that a significant portion of the population can understand and communicate in English.

4. Higher Education and Professional Use: Most higher education, especially in science, technology, engineering, and management, is conducted in English. Additionally, English is the predominant language in the corporate sector, legal system, and various professional fields.

5. Media and Technology: English-language media, including newspapers, television channels, and online platforms, are widespread. The internet and digital

communication have further reinforced the use of English, making it a common language for online content and communication.

6. Diverse Linguistic Landscape: India is a multilingual country with numerous languages spoken across different states. English often serves as a lingua franca, facilitating communication between people who speak different native languages.

As of 2024, India's overall literacy rate stands at approximately 77.7% according to data from the National Statistical Office (NSO). This figure reflects significant variation between different states and regions within the country. erala boasts the highest literacy rate at 96.2%, followed by Mizoram at 91.58%, and Delhi at 88.7%. On the other end of the spectrum, Andhra Pradesh has the lowest literacy rate at 66.4%, with Rajasthan and Bihar following at 69.7% and 70.9%, respectively. There is some relation between literacy rate and using English as a medium of communication, and hence higher literacy rate has a significant bearing on using English as the medium.

In India, approximately 12% of the population can speak English to some extent, which includes both native and second-language speakers (CareerExplorer). However, this percentage varies depending on the proficiency levels considered. Around 30% of Indians have some proficiency in English, making it a widely used second language across the country (CareerExplorer) (Anderson Institute).

These factors collectively contribute to the widespread understanding and use of English in India, making it relatively easy to get responses in English.

5.4.6. Indian retail market

As per the report of Deloitte (June, 2023), the Indian retail business has a significant impact on India's economy, making up 10 percent of the country's GDP and providing employment for 8 percent of the population. Recently, the retail industry has experienced significant expansion attributed to urbanization, higher disposable income, enhanced logistics, expanded product offers, and increased internet accessibility for rural consumers. Currently, India is among the top five retail markets and is projected to become the third-largest consumer market globally by 2030, behind China and the US. The development trajectory of the Indian retail business reveals its significant potential and optimistic future. With the country's continued progress in technology and infrastructure, the Indian retail sector is set to expand even more, solidifying its role as a crucial catalyst for economic growth.

5.4.6.1. Retail future expansion:

The future expansion of the retail industry is expected to be propelled by the following factors:

1. Continued economic growth: India's economy is expected to continue growing, and it is predicted to become the third-largest economy in the world by 2030. In addition, India is projected to increase its number of middle-income families by 110 million (from the present 190 million) and high-income households by 14 million (from the current 15 million) by 2030.
2. Primary consumer group: Approximately 65% of India's population (an increase of almost 50 million individuals) would remain in the primary consumer group, aged between 15 and 59 years, until 2030.
3. Population growth and urbanization: India has surpassed China as the most populated country and will continue to undergo population expansion due to urbanization. In addition, it is estimated that the proportion of the overall urban

population would increase from the present 35 percent to 40 percent by the year 2030.

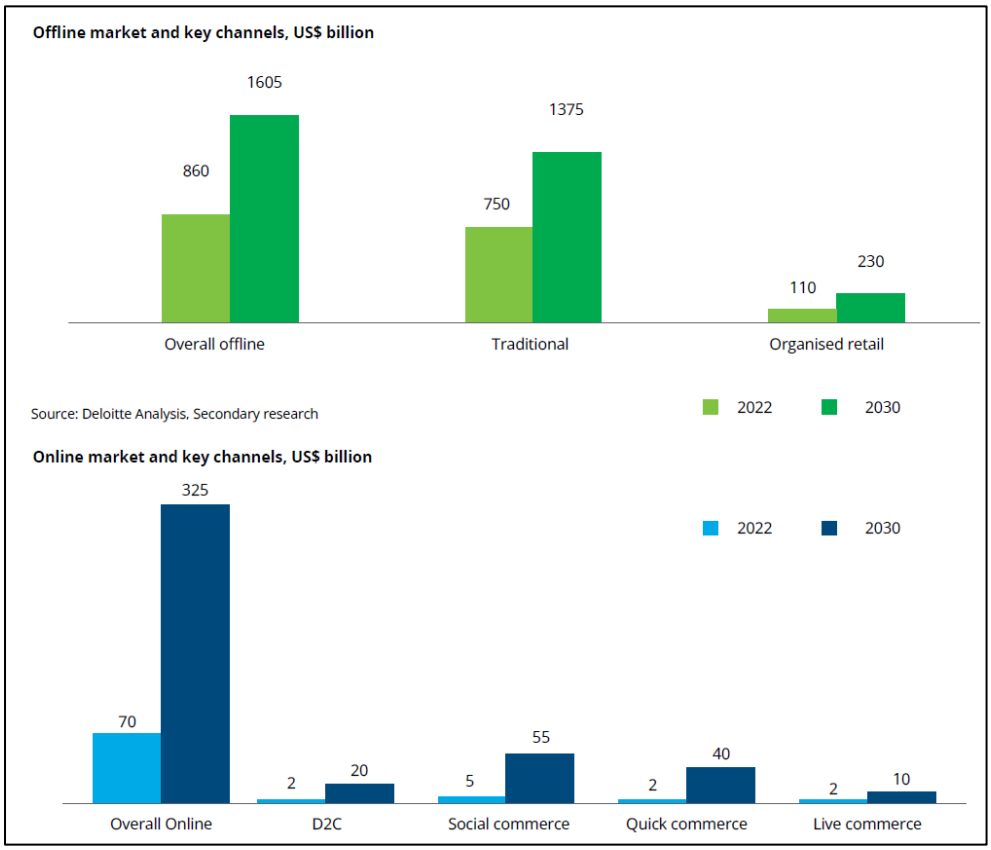
4. Food and grocery: The food and grocery category dominates the retail sector, accounting for the biggest proportion (65 percent). The rise of the industry is fueled by the rising demand for processed foods, which includes savory products, confectioneries, and snacks. The sector also benefits from an increase in dairy consumption and the trend of premiumization, where there is a move from unbranded to branded and value-added variations.
5. Apparel and footwear: The growth of the apparel and footwear industry is mostly fueled by the increasing popularity of athleisure and activewear, as consumers become more health-conscious and prioritize comfort. There is a growing consumer interest in both casual clothing and high-quality ethnic wear that combines traditional features with modern aesthetics.
6. Jewellery: Jewellery retains a prominent place in Indian homes, with gold being the second-largest asset. The category continues to expand, functioning as both an investment vehicle and a fashionable item. Gen Zs and Millennials have a strong need for lightweight and diamond jewellery. Furthermore, purchases connected to weddings account for around 50-55 percent of the overall demand.
7. Luxury: India's luxury sector is expected to have promising possibilities due to its high net worth individual (HNI) growth rate, which is one of the highest in Asia. Brands are aggressively investigating ways to connect luxury products with a wider audience, which is increasing the number of consumers and the rate at which they are purchasing premium items.

5.4.6.2. *The phenomenon of online retail's rapid expansion in India: A paradigm shift*

In India, the conventional retail channel continues to be the largest, however, internet retail is projected to develop at a rate 2.5 times faster than offline retail.

The growth of organized retail may be attributed to the availability of a large range of products, enhanced consumer satisfaction, and the impact of Western mall culture. Nevertheless, the emergence of e-commerce has resulted in a substantial change in customer behavior, with a preference for online purchasing.

Figure 5.3: Paradigm shift in retail: offline to online in Indias



Source: Deloitte Analysis, Secondary research

Note: For D2C channel figures, only brand website sales have been considered

The exponential growth of e-commerce can be attributed to several factors, including the convenience of ordering and returns, a strong logistics

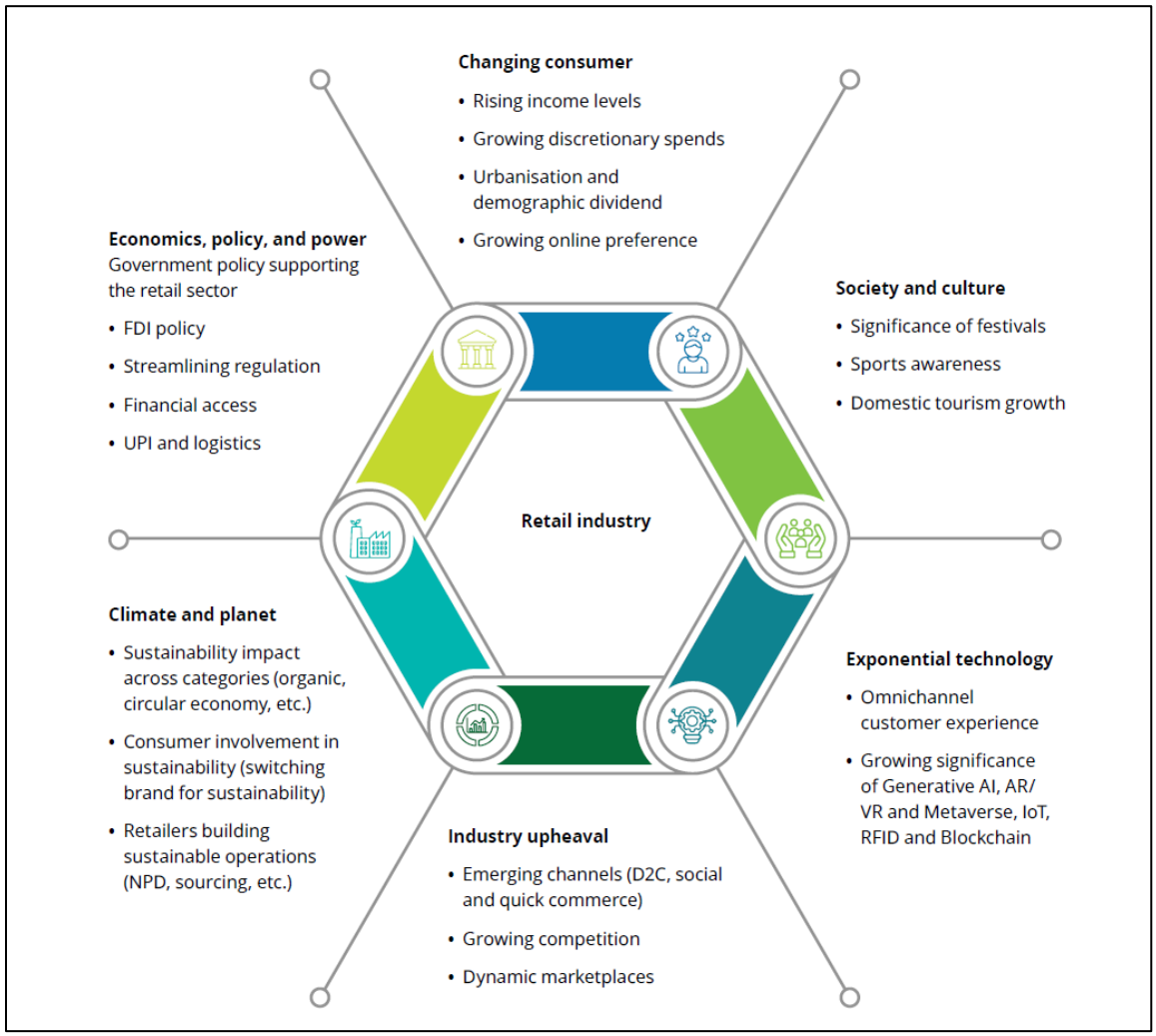
infrastructure that covers over 19,000 pin codes, a digitally proficient consumer base of 220 million online shoppers, and significant investments of US$23 billion from private equity and venture capital firms over a span of five years. As a result, it is anticipated that internet sales will exceed traditional brick-and-mortar retail. This trend is shown in the figure 5.3. Omnichannel retail will become increasingly prominent as businesses merge their offline and online channels to offer consumers the advantages of both.

5.4.6.3. *The six forces shaping the retail sector*

In recent years, the retail industry has seen substantial changes, characterized by the rise of novel business models, improved consumer experiences, and the widespread integration of digital technology across the whole value chain. Amidst the ever-changing business environment, it is imperative for companies to comprehend and adapt to the factors that influence the market in order to succeed. The six key forces (shown in figure 5.4) offer significant insights into the changing market dynamics, enabling organizations to predict developments, coordinate their strategy, and discover new possibilities.

These factors include changing consumer behavior, societal and cultural changes, rapid advancements in technology, disruptions in industries, the economic effects of climate change and sustainability, and changes in economics, policies, and power dynamics. In order to achieve success, firms must expand their perspective to include societal and environmental aspects. Executives must exhibit clear thinking, foresight, and bravery to effectively navigate the rapidly changing retail market.

Figure 5.4: The six forces shaping the retail sector in India


Changing consumer
• Rising income levels
• Growing discretionary spends
• Urbanisation and demographic dividend
• Growing online preference
Economics, policy, and power
Government policy supporting the retail sector
• FDI policy
• Streamlining regulation
• Financial access
• UPI and logistics
Society and culture
• Significance of festivals
• Sports awareness
• Domestic tourism growth
Retail industry
Climate and planet
• Sustainability impact across categories (organic, circular economy, etc.)
• Consumer involvement in sustainability (switching brand for sustainability)
• Retailers building sustainable operations (NPD, sourcing, etc.)
Exponential technology
• Omnichannel customer experience
• Growing significance of Generative AI, AR/VR and Metaverse, IoT, RFID and Blockchain
Industry upheaval
• Emerging channels (D2C, social and quick commerce)
• Growing competition
• Dynamic marketplaces

Source: Deloitte report (June, 2023)

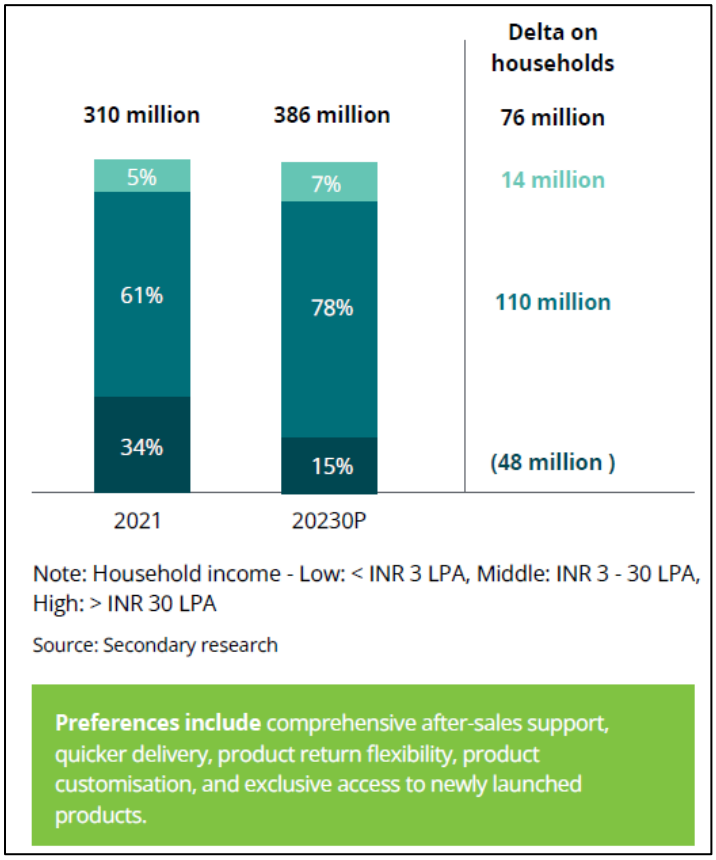
5.4.6.4. *Changing consumers behavior in India*

India has witnessed a significant increase in discretionary earnings, particularly among the expanding middle-class population, in recent years. This has led to a significant change in consumer preferences, as people are increasingly placing importance on quality, convenience, and enhancing their purchasing experiences. Moreover, India's demography is experiencing a transformation, marked by a

significant increase in the urban youth population, mostly driven by Millennials and Generation Z.

Per-capita income in India has had a notable surge, increasing significantly from roughly US$1,400 in 2014 to around US$2,200 in 2022. The economic development has resulted in the formation of a growing middle class, which is expected to increase by 110 million homes (from 190 million) from 2021 to 2030. This expansion is comparable to half of the present households in the European Union.

Figure 5.5: Growing middle class and shifting consumer preferences



Source: Deloitte report (June, 2023)

With the increase in income levels, the younger generations of Millennials and Gen Zs in India are increasingly looking for convenience and value-added services, and they are prepared to pay a higher price for these benefits.

1. 72% of Millennials and 66% of Gen Zs are prepared to pay more for thorough after-sales service.
2. Approximately half of Millennials and Gen Zs are prepared to pay an additional cost for faster delivery and greater freedom in returning products, respectively.

5.4.7. Omnichannel consumer profile in India

The profile of an omnichannel consumer in India is shaped by the rapid digital transformation and the increasing integration of online and offline shopping experiences. Here are the key characteristics and behaviors of omnichannel consumers in India, based on the following internet sources; 1. [ET Retail](www.retail.economictimes.indiatimes.com), 2. [India Retailing] (www.indiaretailing.com), 3. [Statista] (www.statista.com/statistics/):

5.4.7.1. Key Characteristics

1. Digitally Savvy: Omnichannel consumers in India are comfortable using technology and digital platforms. They frequently use smartphones, tablets, and computers to browse and purchase products.

2. Young and Urban: A significant portion of these consumers are young (typically aged between 18-35 years) and live in urban or semi-urban areas where access to digital infrastructure and modern retail formats is better.

3. Informed and Research-Oriented: These consumers extensively research products online before making a purchase. They read reviews, compare prices, and look for recommendations on e-commerce and social media websites

4. Preference for Convenience: They value the convenience of shopping anytime and anywhere. The ability to effortlessly transition between online and offline channels is a major factor in their shopping behavior.

5. Brand Conscious: Omnichannel consumers are often brand-aware and loyal. They follow their favorite brands on social media and participate in online brand communities.

6. Deals and Discounts: They are attracted to promotions, discounts, and exclusive online offers. This price sensitivity drives them to seek the best deals across multiple channels.

5.4.7.2. *Shopping Behaviors*

1. Cross-Channel Shopping: Omnichannel consumers frequently engage in activities like browsing products online and purchasing them in-store, or vice versa. They might also use services like click-and-collect, where they order online and pick up the product from a physical store.

2. Social Media Influence: Social media plays a crucial role in their shopping journey. Platforms like Instagram, Facebook, and YouTube influence their purchasing decisions through advertisements, influencer recommendations, and user-generated content.

3. Use of Mobile Apps: Mobile apps are a preferred medium for shopping due to their ease of use, personalized recommendations, and integrated payment options. Retailers with robust app experiences tend to attract more omnichannel consumers.

4. Expectation of Unified Experience: These consumers expect a consistent and unified shopping experience across all channels. This includes seamless integration of inventory, pricing, and customer service across online and offline touchpoints.

5. Engagement with Technology: Technologies like augmented reality (AR), virtual reality (VR), and artificial intelligence (AI) are increasingly engaging for omnichannel consumers. These technologies enhance their shopping experience by providing virtual try-ons, personalized recommendations, and interactive customer service.

5.4.7.3. *Trends* and Insights

1. Growth in E-commerce: The e-commerce market in India is booming, with a growing number of consumers preferring online shopping due to its convenience and wider product range.

2. Integration of Online and Offline: Retailers are increasingly adopting omnichannel strategies, such as offering unified loyalty programs, integrating online and offline inventory, and providing multiple payment options to cater to the preferences of omnichannel consumers.

3. Rise of Tier-II and Tier-III Cities: Omnichannel retail is expanding beyond metropolitan cities to tier-II and tier-III cities, where the penetration of digital services is increasing.

4. Sustainability Concerns: There is a growing awareness and preference for sustainable and ethical products among omnichannel consumers in India. Brands that align with these values tend to gain more loyalty and trust.

5.4.7.4. *Conclusion*

Omnichannel consumers in India represent a dynamic and rapidly evolving segment. Their behaviors are driven by technological advancements, convenience, and the desire for a seamless shopping experience across all channels. Retailers aiming to attract and retain these consumers need to focus on providing an integrated, personalized, and convenient shopping journey.

5.4.8. Pilot Testing and items purification

The primary objectives of doing a pilot research prior to the main survey are to enhance the questionnaire by refining its content, assess the clarity of instructions, identify any unclear questions, evaluate the layout, and determine the time required to complete it. Measurement items purification involves evaluating the content validity and reliability (Saunders et al., 2012). To guarantee the effectiveness of questionnaires and the respondents' comprehension of instructions, it is important to minimize any difficulties they may have in responding or comprehending the questions (Bryman and Bell, 2011).

Content validity pertains to the extent to which a measurement instrument comprehensively covers the relevant content. The assessment involves soliciting the opinions of a panel of experts to evaluate the extent to which the questions accurately capture the target concepts (Mitchell, 1996; Saunders et al., 2012). A group of marketing scholars was tasked with evaluating the accuracy and appropriateness of the questions related to concepts, as well as the organization and phrasing of the questionnaire. The received comments are reviewed and appropriate revisions are implemented.

The pilot study was carried out in March 2021 by approaching individuals in a shopping mall, education centers, author's personal and professional network and many other public locations. The sample size consists of 100 respondents, which adheres to the recommended requirements for a pilot research sample size. The pilot test requires a minimum of 10 replies, whereas bigger surveys should include between 100 and 200 responses (Saunders et al., 2012). The participants were surveyed for the lucidity of significance, directions, arrangement, terminology and expression, and duration needed to respond to the questionnaire. The participants said that the questionnaire is lengthy due to which they fatigue that has led to an unfinished survey. This resulted in 60% of the respondents completing the questionnaire and balance has submitted the question without completely filling the same. Also, it was informed by some of the respondents that while providing responses they are unable to keep track of the manufacturer-sponsor brands that they are providing responses for. So, to address these issues, following actions were taken:

1. Overall, the instrument encompasses seventy one items that was obtained after aggregating items from all the fifteen focal constructs. This has resulted in the length of the instrument that results into a fatigueness. To address this issue, scale's length was reduced optimally by employing "item/content validity" process, as suggested by Kerlinger (1973), and Straub and David (2004), and MacKenzie et al. (2011). The content validity test is also known as access content adequacy test and is done to evaluate the construct for their content validity. According to Straub et al. (2004, p. 424), content validity concerns "the degree to which items in an instrument reflect the content universe to which the instrument will be generalized". Similarly, Kerlinger (1973, p. 459), defines content validity as "the 'representativeness' or 'sampling adequacy' of the

content—the substance, the matter, the topics—of a measuring instrument." Thus, two related judgments must be made when assessing content validity:

a. Is the individual item representative of an aspect of the content domain of the construct?
b. Are the items as a set collectively representative of the entire content domain of the construct?

The questionnaire was shared with 11 professors serving in esteemed institutes across India, who acted as raters. Raters used a five-point Likert-type scale, ranging from 1 (not at all) to 5 (completely), to rate the extent to which each item captures each aspect of the construct domain. As a result of this process, the scale length for the study was reduced from 71 to 53 items. The scale length for the study was with 33 items, which is already a small number and hence was maintained.

2. Also, partially the second issue of losing track of the brand has been taken care of by reducing the length of the instrument. Further, customized questionnaire were designed for each and every brand such that it starts with the picture of the product and brand that the questions shall be asked in the questionnaire. Further, each and every questions were constructed for the specific brand such that the each and every questions has the name of the product category and brand in it.

Following the collection of the pilot data, the items were filtered by an evaluation of their dependability, as outlined by Churchill (1979). Reliability is assessed through the evaluation of Cronbach's alpha, inter-item correlations, and item-to-total correlation. The inter-item correlation measures the relationship between many items, whereas the item-to-total correlation measures the correlation between a single item and the entire score of the scale. Internal consistency of the scale is

measured by the Cronbach's alpha (Hair et al., 2010). Prior to doing factor analysis, it is desirable to assess in-between item correlation in order to verify dependability. This is necessary since relying on a single measure is not recommended. Alpha's value is contingent upon the quantity of elements, which might lead to deceptive outcomes (Field, 2005). Thus, the items are deemed trustworthy based on their inter-item correlation and item to total correlation, both of which are greater than 0.3 (Field, 2005). Additionally, the Cronbach's alpha value surpasses 0.7, as reported by Hair et al. (2010) and Kline (2005). Nevertheless, there are instances where an alpha value of 0.5 or 0.6 is still considered satisfactory (Churchill, 1979; Nunnally, 1978). The findings of the pilot project are analyzed in chapter six.

5.4.9. Sampling Techniques

Once the techniques of data collection have been established, the subsequent stage is to identify the specific element from which the data will be gathered (Churchill, 1995).

5.4.9.1. Define the population and sampling frame

Prior to proceeding, it is crucial to establish the characteristics of the group under study and determine the list of potential participants(Churchill, 1995). Population is the entire group of individuals or units from whom a sample is chosen (Bryman and Bell, 2011). The target population must be suitable, aligned with the study purpose, and take into account the proper sample unit (J. L. Aaker, 1997; Hair Jr et al., 2019). According to Malhotra and Briks (2003), it is important to define the target population in terms of its constituents, sample unit, extent, and duration. The demographic for this study consists of Indian consumers experienced in omnichannel buying, encompassing both genders, who are above the age of 18 and reside in India. The basis for omnichannel behavior of the customer is driven by the availability of the internet and mobile phone, apart from other systems such as

laptops, computers, tablets, etc. The study used a cross-sectional research approach, where data is gathered at a particular point in time from the designated cases.

5.4.9.2. Justification of age group:

The rationale for selecting this age group (18+) mostly stems from the requirement of the Ethical Research Committee, which mandates that respondents must be 18 years of age or older. Approval from the committee is necessary unless the research focuses on children or specific young responders. Furthermore, according to the data provided by CIA (Central Intelligence Agency) World Factbook demographic statistics, the overall population of India in 2017 was 1,281,935,911. It is worth noting that the percentage of men is about equivalent to that of females with gender ratio of 1.08 males/females, as seen in Table 5.9. According to the age-based classification, 72.66% of the population is above the age of 14 years and 54.76% above the age of 25 years. Also, latest report of UN states that India has become the most populous nation with population of 1,425,775,850 at the end of April 2023 (UN Population Census Estimats).

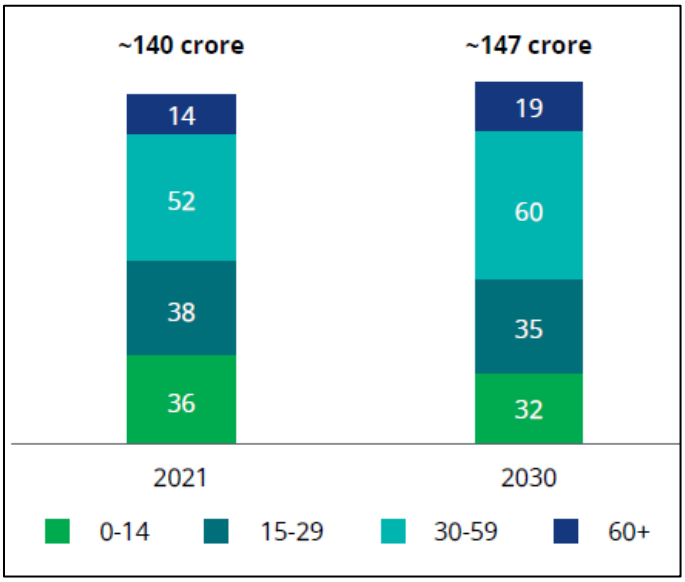
Table 5.8: Distribution of population based on gender and age group in 2017

Age group	Male	Female	Total	Percentage
< 14 years	186,087,665	164,398,204	350,485,869	27.34%
15–24 years	121,879,786	107,583,437	229,463,223	17.90%
25-54 years	271,744,709	254,834,569	526,579,278	41.08%
55-64 years	47,846,122	47,632,532	95,478,654	7.45%
65 years and over	37,837,801	42,091,086	79,928,887	6.24%
Total	665,396,083	616,539,828	1,281,935,911	

Source: CIA (Central Intelligence Agency) World Factbook demographic statistics

As per the report (Future of Retail Emerging Landscape of Omni-Channel Commerce in India) of Deloitte (June, 2023), India's urban population is expected to increase by around 100 million inhabitants by 2030 (see figure 5.6), resulting in a rise in urbanization from 35 to 40 percent. In the middle of this, the per capita consumption in rural regions is projected to increase by 4.3 times by 2030, above the 3.5 times rise in urban areas. This exemplifies the unexplored capacity of rural markets and their impact on India's economic growth. The primary catalyst for India's economic expansion will be the demographic segment aged 15-59, which is forecasted to rise significantly to 950 million individuals by 2030, resulting in an increase of 50 million people. In addition, it is projected that the number of individuals aged 60 and over would rise by 50 million (from 140 million) by the year 2030. Kerala and Tamil Nadu are expected to have the highest number of people in this age group.

Figure 5.6: Age distribution (in crores)



Source: Deloitte report (June, 2023)

5.4.9.3. *Justification of context:*

As per the report of Deloitte (June, 2023) , following are the key features of the Indian context that are in relevant for the current studies:

Purchase dynamics in India

Factors that strongly influence purchasing decisions is price, followed by the brand reputation.

Price is the key determinant of purchasing decisions for more than 70 percent of customers, including Millennials and Gen Zs from various socioeconomic ranges. Brand reputation is a crucial factor that influences customer decisions, accounting for around 35-45 percent of their decision-making process.

Key influencer of purchase decision-making

In the decision-making process among Gen Zs, Millennials, and income groups (55-65 percent), "online research/reviews" has the most important influence.

Revealing the channel preferences of urban consumers

Consumers have a significant inclination for brick-and-mortar establishments in areas such as furniture and home furnishing, gems and jewellery, and pharmacy health and wellness. This choice emphasizes their inclination towards cost competitiveness and convenience.

Offline stores are strongly preferred in these areas, with a preference that is typically 2-4 times greater compared to internet possibilities. However, the e-commerce industry is predominantly used for buying consumer electronics and cosmetics and personal care products. This emphasizes the need of having competitive pricing and a diverse selection of items in these specific categories. Within these categories, there is a modest inclination towards online purchasing,

which is around 1.5-2 times more than offline alternatives. This can be seen in the figure 5.7. However, the trend is bound to shift toward e-commerce and omnichannel in the near future for product categories of consumer electronics, apparel and footwear, and beauty and personal care as it is for grocery.

The future of retail will be shaped by six significant trends: new commerce, advanced technology, kirana tech, private labels, luxury retail, and experiential retail. These trends emphasize the significance of utilizing the potential of innovative business models, adopting technological progress, merging kirana stores with digital ecosystems, utilizing private labels to increase profitability, catering to the changing luxury retail market, and providing customers with immersive experiences.

Figure 5.7: Channel preference of Indian urban consumers

Category	Offline Multi Brand Store	E-commerce marketplace	Quick Commerce	Offline Single Brand Store	Key Drivers
Grocery	1 ~50%	2 ~25%	2 ~25%		Price Convenience
Consumer Electronics	2 ~25%	1 ~55%			Price Trust
Apparel & Footwear	2 ~30%	1 ~45%			Wide range of products Experience
Beauty & Personal Care	2 ~25%	1 ~45%			Wide range of products Price
Furniture & Home Furnishings	1 ~50%			2 ~30%	Price Convenience & Experience
Gems & Jewellery	2 ~40%			1 ~45%	Trust
Pharmacy, Health & Wellness	1 ~50%	2 ~20%			Trust Convenience

Source: Deloitte consumer survey report, N = 841 (June, 2023)

The consequences for retailers are clear. Customer experience will play a crucial role in distinguishing retailers in the highly competitive market. As consumers look for convenient and efficient shopping experiences, brand loyalty will take a backseat. Retailers have the chance to target non-metro markets and customize their products to cater to the specific requirements of the new-age customer. The continuous e-commerce revolution, driven by evolving commerce models, will consistently reshape the retail business, requiring a greater focus on omnichannel strategy.

The sampling frame is a comprehensive enumeration of all the units in the population from which the sample will be chosen (Bryman and Bell, 2011). Obtaining a list of the population of omnichannel customers or internet user across devices is not feasible. Telecommunications businesses regard the personal information of their subscribers as confidential and are prohibited from disclosing it. Consequently, the researcher's request to get a roster of omnichannel customers or network uusers was denied. Therefore, due to the lack of a sample frame, the sampling strategy is used.

5.4.9.4. *Sampling technique*

Sampling techniques may be classified into two categories: probability sampling and non-probability sampling. Probability sampling ensures that every element in the population has an equal chance of being picked, but non-probability sampling does not allow for estimation of the likelihood of picking an element (Churchill, 1995). The probability sample comprises four types of samples: simple random sample, systematic sample, stratified random sampling, and cluster sampling. The non-probability sampling methods consist of convenience sampling, quota sampling, and snowball sampling (Bryman and Bell, 2011).

The present study will utilize convenience sampling, a kind of non-probability sampling, due to the unavailability of a sample frame (Ebrahim, 2013). Saunders et al., 2012). Convenience sampling is a commonly used method of non-probability sampling, as stated by Hair et al. (2006). It is frequently employed in marketing, as evidenced by studies conducted by Yang et al., (2023), Nosi et al., (2022), Hanaysha (2016), Nabela (2023), Fernandes and Barfknecht (2020), and many more. Convenience sampling refers to the deliberate selection of readily accessible components from the population defined for the study, without using randomization. Although the approach is straightforward, rapid, and cost-effective, its fundamental downside is that it lacks representativeness of the population (Churchill, 1995; Saunders et al., 2012).

5.4.9.5. *Sample size*

Calculating the sample size is a highly intricate process that relies on several elements, including the margin of error, level of confidence, population size, and statistical methodologies (Saunders et al., 2012). Although large samples are typical of the population, they can be costly, challenging to acquire, and have an impact on the outcomes (Saunders et al., 2012). Certain statistical software programs establish the threshold for determining the required sample size. The present work utilizes Structural Equation Modeling (SEM) to analyze the connections between components in the proposed model. The use of Structural Equation Modeling (SEM) necessitates the use of higher sample sizes in comparison to other multivariate analysis methods. The necessary sample size for structural equation modeling (SEM) is determined by five criteria (Hair et al., 2010). One of the assumptions of Structural Equation Modeling (SEM) is that the data follows a multivariate normal distribution. To mitigate the issues related to the departure from normalcy, it is recommended that the ratio between the number of

respondents and parameters should be 15 to 1. The second widely used estimating methodology is maximal likelihood estimation (MLE), which recommends a minimum sample size of 200 respondents. The third factor is the complexity of the model, which is dictated by the quantity of constructs, indicator variables, and multi-group analyses. More intricate models need greater sample sizes. Furthermore, the presence of missing data might distort the testing of the model and diminish the size of the sample. Consequently, it is imperative to take this into account when establishing the appropriate sample size. In order to accurately estimate the average error variance of indicators, it is necessary to have high sample sizes, especially when dealing with communalities that are less than 0.5 (Hair Jr et al., 2019). According to Kline (2005), a minimum sample size of 200 is regarded adequate for a complex model. Hair et al. (2010) raise the minimum criterion to 300 and lower the permissible communality level to 0.45 for under-identified notions. The current study requires a sample size of 200, which fulfills all the requirements of the analytic approach.

5.4.9.6. *Sample and procedure*

Data for our study was collected through separate surveys conducted at different times, involving diverse participants. There's no influence of a common-method variance as we gathered data from multiple sources and at two different time points separately; one, from industry expert for measuring cross channel integration level of manufacturer-sponsor consumer brands, and second, from consumer of these brands for which expert has provided responses. Also, the data was collection happened through personal interaction at various institutions, wherein product and brand for which responses intended was shown either through overhead projectors or by providing explanation of the statement and photo provided in the questionnaire. The participants included industry experts providing insights on CCI

levels and consumers sharing information on perceived value, preference, and loyalty. The expert data was collected before the consumer data.

5.4.9.6.1. *Data collection from experts*

Industry experts in India, with a minimum of 15 years of experience in sales, marketing, and/or distribution functions, were approached for data collection through various offline and online sources. The selection of brands for the study was based on the Top500 Fortune India list, obtained from the websites-link: https://sanver.com/blog/et-500-companies-in-india/ and https://www.fortuneindia.com. Additional B2C (consumer) brands were considered based on the recommendations from various websites of repute. The chosen consumer brands represented diverse products categories of a consumer electronics, consumer electricals, mobile, hair-skin care, packaged foods, apparels-fashion, home appliances, and air conditioners. The criteria for choosing experts was such that, first, they should have adequate years of experience working in the industry/product category for which they are evaluating, second, they have developed an appreciation around omnichannel and are aware of the latest development happening in the omnichannel strategy in the industry they practice, and third, they understand each and every questions and are in the position to answer them to the accepted level of an accuracy. These criteria were met by a self-declaration at the start of the self-administered questionnaire. The experts were approached either personally or telephonically or through a social media messaging. Requests were made to experts to voluntarily participate in the brand evaluation process with a small note covering a brief introduction about the author, the objective of administering the questionnaire, and a google form questionnaire links. The author has made customized google forms for every focal brands, with each questions asking about that particular brand only. After a self-declaration, the questionnaire begins with the brand name, photograph of the product and brand,

and the product category on which the questionnaire has been framed. Once they agree to participate, the brief explanation of the questionnaire is provided. In most of the cases expert shall fill the questionnaire when they find time, offline and submit the filled-questionnaire at their convenience. In some of the cases they ask to stay as a standby so that the doubts can be clarified while they evaluate the brand and fill the questionnaire. Some of those who participated in the survey were industry veterans and others were very highly placed in the leading brands in the industry.

A 3x5 matrix approach was adopted to collect data, where each expert evaluated a maximum of 5 brands on their omnichannel transformation phase, and each brand was evaluated by at least 3 different experts.

Experts were approached through an offline, online and both the platforms by utilizing either a purely professional network portal, and/or an author's professional network of almost 3 decades as a practitioner. From the initial 121 experts approached, questionnaires were sent for conducting evaluation of 106 shortlisted brands across 11 different categories. Ultimately, 56 unique experts responded, collectively evaluating 86 brands. For exactly 50 brands, three or more responses were obtained from the experts. But, as the number of customer responses obtained for these brands exceeded the required threshold numbers for only 43 of them, we studied 43 brands with the following industry/number of brand/number of expert response details: air-conditioners/11/37; home appliances/5/21; consumer electronics/3/10; consumer electrical/1/3; mobile/7/25; hair-skin/8/28; packaged foods/7/34; apparels-fashion/1/3. Details of these brands are in the Table 5.9.

Table 5.9: Focal product category & brand, and details on expert & consumer response

Category	Website	Number of Brand	Brand	Expert Response	Consumer Response
Air conditioner	https://www.fundoodata.com/companies-in/list-of-consumer-durables-home-appliances-companies-in-india-i6	**11**	Blue Star	3	58
			Carrier	3	55
			Hitachi	3	60
			LG	3	46
			Lloyd	3	58
			Mitsubishi	4	59
			OGeneral	4	55
			Panasonic	4	59
			Samsung	3	60
			Voltas	3	62
			Daikin	4	79
			Air conditioner	**37**	**651**
Home appliances	https://www.fundoodata.com/companies-in/list-of-consumer-durables-home-appliances-companies-in-india-i6	**5**	Electrolux	4	55
			Haier	6	56
			Panasonic	4	60
			Samsung	3	58
			Godrej	4	51
			Home appliances	**21**	**280**
Consumer electronics		**3**	LG	3	59
			Samsung	3	56

	https://www.fundoodata.com/companies-in/list-of-consumer-durables-home-appliances-companies-in-india-i6		Sony	4	61
			Consumer electronics	**10**	**176**
Consumer Electricals	https://www.ceoinsightsindia.com/ranking/10-best-electrical-equipment-appliance-brands-2019-rid-32.html https://www.worldblaze.in/best-electrical-switches-brands-in-india/	**1**	Polycab	3	56
			Consumer Electricals	**3**	**56**
Mobile	https://www.gizbot.com/mobile-brands-in-india/	**7**	OnePlus	3	57
			OPPO	3	62
			Redmi	4	61
			Samsung	4	57
			Vivo	3	61
			Xiaomi	3	73
			Apple	5	57
			Mobile	**25**	**428**
Hair and Skin Care	http://www.walkthroughindia.com/grocery/top-15-leading-fmcg-companies-in-india/	**8**	Clinic Plus	4	77
			Dove	4	50
			Emami	4	57
			Himalaya	3	61
			Patanjali	3	56
			Sunsilk	4	57
			Tresemme	3	46
			Vaseline	3	56
			Hair and Skin Care	**28**	**460**

Packaged food	http://www.walkthroughindia.com/grocery/top-15-leading-fmcg-companies-in-india/	**7**	Britannia	4	50
			ITC	4	53
			Kissan	6	49
			Lay's	4	52
			Patanjali	4	59
			Balaji	3	61
			Parle	9	56
			Packaged food	**34**	**380**
Apparels & Fashion	https://www.mapsofindia.com/my-india/business/20-famous-fashion-brands-in-india-you-never-knew-were-indian	**1**	Raymond	3	71
			Apparels & Fashion	**3**	**71**
Total		**43**		**161**	**2502**

Product category wise list of 43 brands operating in India for which we obtained their CCI are as follows: air conditioner: Blue Star, Carrier, Daikin, Hitachi, LG, Lloyd, Mitsubishi, OGeneral, Panasonic, Samsung, and Voltas; mobile: Apple, OnePlus, OPPO, Redmi, Samsung, Vivo, and Xiaomi; home appliances: Electrolux, Godrej, Haier, Panasonic, and Samsung; Hair & skin care: Clinic Plus, Dove, Emami, Himalaya, Patanjali, Sunsilk, Tresemme, Vaseline; consumer electronics: LG, Samsung, Sony; Apparels & Fashion: Raymonds; consumer electricals: Polycab; packaged food: Balaji, Britannia, ITC, Kissan, Lay's, Parle, Patanjali.

Some experts either regretted or did not respond to the request made. Majority of those who regretted did it citing reasons such as lack of information on either the focal brands or omnichannel strategy of the manufacturer consumer brand. Some regretted citing their signing of a non-disclosure agreements with their current employer, according to which they can't participation in any such surveys. Some were also hesitant to click any link including Google survey links, even when assurances were provided. Very few evaluated in the pen-paper format and submitted through social media by either scanning and/or photos.

5.4.9.6.2. *Data collection from consumers:*

Responses from consumers were collected for only those brands and categories that were evaluated by experts. Participants were recruited from various sources and geographic locations, including an online consumer panel through a certified market research firm and author's network that includes various organization employees, school/colleges staffs, personal network, and social media connects. Most of the participants recruited were a combination of a personal, and professional network, including usage of a social media platform for recruiting unknown participants in India. Participants includes school teachers and

administration-staffs, colleges professors, administrative-staffs, and in some cases students from the post-graduate programs. The use of a broad consumer panel was chosen to account for the influence of demographic factors on regressand (Ansari et al., 2008). The sampling frame was limited to internet users, as they represent potential online channel buyers and are more likely to be impacted by OMC. Consumers without internet access were excluded from the sampling process.

Convenience sampling was employed to collect responses, with each respondent participating exactly once. A total of 2,744 responses were collected for 53 brands, with 2,320 responses received for 43 brands that had more the threshold number of 40 responses per brand. Category/number of brands/number of consumer responses (respondents) details of the collected responses are as follows: air-conditioners/11/602; home appliances/5/255; consumer electronics/3/164; consumer electrical/1/56; mobile/7/404; hair-skin/8/435; packaged foods/7/342; apparels-fashion/1/62. The multi-level sample, comprising 43 brand groups, achieved adequate statistical power by surpassing the recommended 30-40 groups for testing a medium standardized effect (Scherbaum and Ferreter, 2009).

Regarding demographic characteristics (as per the Table 5.10), the majority of respondents (35.39%) were aged 25-34 years, 56.03% were graduates, 60.56% were male, 63.41% belonged to family sizes of 4-6, and 38.97% had annual incomes ranging from Rs. 25,000/- to Rs. 59,999/-. The sample exhibited reasonable diversity in terms of demographics.

Table 5.10: Demographic characteristics of respondents

Classification	Percentage
Consumer age (years)	

25-34 years	35.39
35-49 years	28.88
18-24 years	28.58
50-65 years	6.25
more than 65 years	0.91
Consumer education level	
Graduate	56.03
upto 10th Grade	20.95
Post Graduate	19.44
upto 8th Grade	1.85
Doctorate	1.72
Consumer gender	
Male	60.56
Female	38.58
Prefer not to say	0.56
Other	0.30
Consumer family size	
4 to 6	63.41
upto 3	24.74
more than 6	11.85
Consumer income level	
Rs.25,000/- to Rs.59,999/-	38.97
Less than Rs.25,000/-	29.96
Rs.60,000/- to Rs.149,999/-	20.69
Rs.150,000/- to Rs.3,99,999/-	5.43
more than equal to Rs.2,500,000	1.77
Rs.1,000,000/- to Rs.2,499,999/-	1.68
Rs.400,000/- to Rs.999,999/-	1.51

5.4.10. Analyzing Quantitative Data

The process of data analysis consists of two distinct stages: data cleansing and factor analysis. To begin, the initial task involves cleansing the data by examining for any missing data and outliers. Additionally, it is necessary to assess the assumptions of multivariate analysis using SPSS v.19. Descriptive statistics are employed to offer a comprehensive summary of the sample, presenting numerical descriptions of variables through the calculation of the mean and standard

Table 5.11: Summary of used statistics techniques in main survey

Analysis	Purpose	Technique	Software	Cut-off point	Source
Missing data	Examining the trend, scope of data that is missing, and potential methods of addressing the issue.	Little MCAR test	SPSS	Randomly Missing data <10%	Hair et al., 2010
Outliers	Univariate refers to the occurrence of extreme values on a single variable.	Standardised scores (z)		$z < \pm 3.29$	Tabachnick et al. (2013)
	Multivariate pertains to the occurrence of extreme values on multiple variables, beyond the number of two.	Mahalanobis D^2		$D^2/df < 2.5$	Hair et al., 2010
Testing the assumptions of Multivariate analysis					
Normality	Normality of univariate	Trimmed mean	SPSS	Slight difference from mean	Pallant, 2020
		K-S test		Significant value >0.05	
		Skewness & kurtosis		Value$\leq \pm 2.58$	Hair et al., 2010
	Normality of multivariate	Normal Q-Q plot	SPSS	Reasonably straight line	Pallant, 2020
		Mardia's coefficient	AMOS	Significant value ≤ 0.05	Mardia, 1970

Homoscedasticity	Equal variance among predictors for dependent variable.	Breusch-Pagan's test	SPSS	Insignificant value > 0.05	Pallant, 2020
Multicollinearity	High independent variable correlation	Tolerance		Tolerance >1	Hair et al., 2010
		VIF		VIF< 10	
Factor analysis					
Exploratory factor analysis	Data factorability	Bartlett's test	SPSS	Significant < 0.05	Pallant, 2020
		KMO		Value > 0.6	
	Extraction of factors	Eigenvalues		Eigenvalue ≥1	
		Scree test		Before inflection point factors	Hair et al., 2010
	Rotating factors	Communality		Communality ≥ 0.5	
		Factor loading		Factor loading ≥ 0.4	
Multi-level modeling decision					
Checking for clustering of data	Inter-class correlation	Inter-class correlation	Excel tool	ICC > 3 with p <0.05	Duncan et al., 1997
	Design effect calculation (DEFF)	Design effect calculation	Excel tool	DEFF > 2 with p <0.05	Kish, 1995; Muthen and Satorra, 1995
Endogeneity test	Random effect estimator	p-value (REF vs FE_L2)	multilevel IV() function in REndo package 'r'	Level of significance P < 0.001 P < 0.01 P < 0.05	Gui et al., 2023
	Level-2 Fixed effect estimator	p-value (FE_L2 vs GMM_L2)			
Structural Equation Modelling (SEM)					

Confirmatory factor analysis	Goodness of fit of the measurement model	Absolute fit indices	AMOS	χ^2 – insignificant value χ^2:df ≤ 4:1 GFI ≥ 0.9 RMSEA ≤ 0.08 SRMR ≤ 0.08	Hair et al., 2010
		Indexes of incremental fit		TLI ≥ 0.9 CFI ≥ 0.9	Kline, 2005
		Parsimony fit indices		AGFI ≥ 0.9	Hair et al., 2010
	Validity of the measurement model	Convergent validity Discriminant validity	AMOS	AVE ≥ 0.5 CR ≥ 0.7 AVE > (correlation between two constructs)^2	Hair et al., 2010
Structural model	Testing Hypotheses	Significance level,	Mplus	Level of significance P < 0.001 P < 0.01 P < 0.05	

deviations (Saunders et al., 2012). During the second stage, factor analysis is performed, which includes both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Table 5.11 provides a concise overview of the statistical methods employed to analyze numerical data for the primary survey.

5.4.10.1. Preliminary Analysis

Prior to analysis, the data undergoes a screening process to identify and rectify any problems (Pallant, 2020). This involves verifying the precision of data entry by identifying any values that are outside the specified range (Pallant, 2020; Tabachnick et al., 2013).. Subsequently, an assessment is conducted to identify any instances of missing data or outliers.

Missing data refers to the values that are not accessible for one or more variables (Pallant, 2020). Missing data can have several consequences, including a decrease in the sample size and significant distortion in the data. This can result in skewed outcomes and hinder the generalizability of the findings (Tabachnick et al., 2013). Hair et al. (2010) propose a four-step process for verifying missing data and implementing a solution: The process has four steps: (1) identifying the nature of the missing data; (2) evaluating the magnitude of the missing data; (3) determining if the missing data is random or not; and (4) implementing the appropriate solution. Random missing data can occur when it is less than 10% for each case, as stated by Hair et al. (2010), or less than 5% according to (Tabachnick et al., 2013). However, the problem is rather minor and any potential solution may be implemented with equal effectiveness.

An outlier refers to an observation that possesses a specific mix of qualities that sets it apart from other observations (Hair et al., 2010, p.64). Outliers can occur due to four main reasons: inaccurate data input, missing values that were not properly

accounted for, cases that do not belong to the population, or cases that belong to the population but have extreme values that deviate from the normal distribution (Tabachnick et al., 2013). Extreme scores can occur either on a single variable, referred to as univariate, or on more than two variables, referred to as multivariate (Kline, 2005). Univariate outliers are identified by transforming data values into standard scores, whereas multivariate outliers are dealt with using the Mahalanobis method (Hair et al., 2010). Once outliers have been detected, the most challenging aspect is determining whether to keep or discard them.

Structural equation modeling, a multivariate technique, is used to analyze the relationships between the variables in the proposed theoretical model. It is crucial to scrutinize the underlying assumptions of multivariate techniques, which encompass normality, homoscedasticity, and multicollinearity (Hair et al., 2010).

Normality pertains to the degree to which the distribution of the gathered data adheres to a normal distribution (Hair et al., 2010). The shape normalcy of variables may be assessed using two components: skewness, which measures the symmetry of the distribution, and kurtosis, which measures the peak of the distribution (Tabachnick et al., 2013). A normal distribution exhibits zero skewness and kurtosis, however minor deviations are considered acceptable within the range of -2.58 to +2.58. Univariate normality may also be identified by the use of the Klomogorov-Smirnov and Shapiro-Wilk tests (K-S test denoted by D) (Field, 2005), as well as by comparing the trimmed mean to the mean value. Multivariate normality refers to the normal distribution of combinations of variables. It is a challenging task to evaluate and necessitates the normal distribution of each individual variable (Hair et al., 2010). Graphical detection of this phenomenon can be achieved by the utilization of a normal Q-Q plot and/or Mardia's coefficient, as

proposed by Mardia in 1970. If the assumption of normalcy is violated, the data can be processed to correct for the lack of normality (Hair et al., 2010).

Homoscedasticity is the characteristic of having a consistent dispersion of scores for a specific continuous variable, regardless of the values of another continuous variable (Tabachnick et al., 2013). An essential assumption connected to normalcy is that the variation of the dependent variable being described in the dependency relationship should not be concentrated in only a restricted range of the independent values (Tabachnick et al., 2013). Breusch-Pagan's test is used to evaluate the homogeneity of variables. Heteroscedasticity arises when the condition of homoscedasticity is not met, which is due to the non-normal distribution of any of the variables (Tabachnick et al., 2013).

Multicollinearity refers to a situation where there is a strong correlation between variables that exceeds a threshold of 0.9 (Tabachnick et al., 2013) or 0.85 (Kline, 2005). Multicollinearity can diminish the predictive precision of a regression model, impede the estimation of regression coefficients, and impact the outcomes of statistical tests (Hair et al., 2010). The assessment is based on the tolerance and variation of inflation (VIF) (Hair et al, 2010; Tabachnick et al., 2013)

5.4.10.2. Common-method bias (CMB)

Campbell and Fiske (1959) were the first to discuss the concept of CMB. They discovered that some of the differences seen in their study, which involved several traits and procedures, might be related to the specific methods utilized. Common method bias (CMB) arises when the measurements of the associations between several constructs are distorted due to the employment of the same assessment technique (Podsakoff & Organ, 1986). Method bias is believed to occur due to many factors. One main factor is the consistent response patterns that raters might

employ across different assessments. This phenomenon may be attributed to the predisposition of individuals to conform to societal norms, their inherent emotional states, or their tendency to respond in an agreeable, moderate, or exaggerated manner (Podsakoff et al., 2012; Spector, 2006). CMB may arise from similarities in the structure or phrasing of survey items, leading to similar replies from respondents. It can also result from the closeness of items in an instrument and similarities in the timing, medium, or location of data collection (Edwards, 2008). Although the common method bias (CMB) is well recognized as a significant issue, especially in survey research, it continues to be a topic of interest and a continuing worry for researchers (e.g., Spector et al., 2019). As per Jordan and Troth (2020), a common issue arises from a survey conducted by a single administration in which independent variables and dependent variables, as well as all other variables are collected simultaneously using a consistent format, such as Likert-type scales. In short, it may readily manifest in cross-sectional surveys. Surprisingly, although the issue of common method bias (CMB) is commonly associated with self-reporting, Spector (2006) points out that it is not limited to self-reporting alone. Researchers often neglect to consider this problem when it comes to other types of reports, such as peer ratings or supervisor reports, even though these methods involve measuring data from both the independent variables (IVs) and dependent variables (DVs) simultaneously by supervisors or peers. He observes that several researchers presume that cohorts that rely on reporting from others instead of self-reporting are impervious to what is an innate human reaction. Undoubtedly, the possibility of bias is there, regardless of whether it is a self-report or a report from peers or supervisors.

5.4.10.2.1. *What are the issues associated with CMB?*

It is well accepted in literature that there are two primary negative consequences resulting from CMB, as indicated by Podsakoff et al. (2012)p and Williams et al.

(2010). One significant issue is that CMB (common method bias) might impact the accuracy and credibility of measurements. This issue is problematic as it might result in erroneous assessments on the reliability and convergent validity of a scale. Additionally, technique variance may falsely inflate reliability estimates, leading to the underestimation of corrected correlations in meta-analysis (H. Le et al., 2009). An other significant issue with CMB is its potential to introduce a bias in the estimation of the links between two distinct entities. This type of bias has the potential to either increase or decrease the estimations of the link between the two constructs (Antonakis et al., 2018).

There are two primary methods for reducing CMB: procedural and statistical, as stated by Podsakoff et al. (2012). Podsakoff et al. (2003) state that the most effective approach relies on the specific research topic, the causes of method variance, and the practicality of the available options. Jordan and Troth (2020) suggests that it is crucial to acknowledge that CMB is a form of bias in research, therefore, implementing methodological and study design solutions before collecting data in practical settings provides a more superior answer in terms of quality.

5.4.10.3. Factor Analysis

Factor analysis is differentiated from other statistical approaches, such as regression (Pallant, 2020). The purpose of this technique is to decrease the amount of data and categorize variables into a group of components by detecting the fundamental structure among variables (Hair et al, 2010; Pallant, 2020). There are two primary methods of factor analysis: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) (Pallant, 2020). The present study utilizes exploratory analysis throughout the initial phases of data analysis to condense the data and categorize the variables into a set of components. The CFA is employed

in the final stages of data analysis, namely in the structural equation modeling, to assess the validity of the measurement theory.

EFA and CFA differ primarily in their approach to data analysis. While EFA examines the data itself and uses statistical results to identify the factor structure and number of factors, CFA relies more on theoretical considerations. The CFA determines the quantity of factors and associated variables utilized by the researcher, in accordance with theoretical principles. Confirmatory factor analysis (CFA) is a statistical technique employed to determine if the measurement theory should be accepted or rejected (Hair et al., 2010).

The EFA consists of three sequential steps: data appropriateness assessment, factor extraction, and factor rotation. The adequacy of data is assessed based on the sample size and the magnitude of the associations between variables (Pallant, 2020). According to Tabachnick et al. (2013), a sample size of at least 300 cases is recommended for doing factor analysis. Some argue that the ratio between participants and items, rather than the overall sample size, is what matters (Pallant, 2020). Field (2005) proposes a minimum ratio of 10:1 between the number of participants and the number of items, but some researchers recommend a ratio of just five instances per item (Hair et al, 2010; Palllant, 2010). The factorizability of data is assessed using two statistical measures: Bartlett's test of sphericity and Kaisr-Meyer-Olkin (KMO) (Pallant, 2020).

In the second step, factor extraction is performed to determine the appropriate number of factors that accurately capture the underlying structure of the variables under analysis (Hair et al., 2010). There are two techniques for extracting factors: component analysis and common factor analysis. Principal component analysis (PCA) is a statistical method that examines the overall variance and identifies

variables that capture tiny amounts of unique variance and, in some cases, incorrect variance (Hair et al., 2010, p.107). According to Hair et al. (2010, p.107), the analysis assumes that the structure of the variables is not defined by both the unique and error variance. The present work relies on principal component analysis, a widely utilized approach (Pallant, 2020), that is suitable for reducing data (Hair et al, 2010). The quantity of extracted components is determined using the eigenvalue and scree test, as stated by Pallant (2020).

Lastly, there is the factor rotation, which may be approached by two primary methods: orthogonal and oblique rotation. There is a lack of advice for choosing between different methodologies. However, Hair et al (2010) propose using orthogonal rotation for reducing data. Varimax rotation is a widely used method for orthogonal rotation (Pallant, 2020).

5.4.10.4. Endogeneity

Endogeneity is a prevalent issue in all causal analyses. It occurs when the assumption of independence between an explanatory variable and the error in a statistical model is broken. Endogeneity can be caused by several factors, such as response bias in surveys, the exclusion of significant explanatory variables, or the presence of simultaneity between explanatory and response variables. Instrumental variable estimate offers a potential answer. Nevertheless, locating reliable and robust external tools might be challenging. As a result, internal instrumental variable methods have been suggested to address endogeneity issues without depending on external instruments. The REndo R package incorporates several internal instrumental variable methods, including latent instrumental variables estimation (Ebbes et al., 2005), higher moments estimation (Lewbel, 1997), heteroscedastic error estimation (Lewbel, 2012), joint estimation using copula (Park & Gupta, 2012), and multilevel generalized method of moments (Kim &

Frees, 2007). The utilization of the package is demonstrated using both simulated and real-world data.

Individual dyadic relationships between cross channel integration and each components of customer perceived value were tested for presence of endogeneity We report the regressions that we evaluated using the MultilevelIV() function in REndo package and the resulting coefficients for the REF (random effect estimator), FE_L2 (level-2 fixed effect estimator), and GMM_L2 (level-2 generalized method of moment estimator) obtained.

For testing for higher level endogeneity in multilevel settings, we checked the results of the omitted variable test comparing REF and FE_L2. If the null hypothesis is rejected, (that is, p_value < 0.05), then the model suffers from omitted variables in the level-2. On the other hand if the null hypothesis is not rejected (that is p_value >=0.05) then the model doesn't suffer from the omitted variable biasness.

Further, we provided variable coefficients for all the three estimators for the dependent variable of decision_score against each other. We also provide estimate, standard errors, z-score, and z-score for REF, and FE_L2. Further, we provide omitted variables test for REF and FE_L2 that includes statistics on degree of freedome, Chi square, and p-values. We conclude that the null-hypothesis can't be rejected for all the five models, hence are free from the omitted variable biasness.

5.4.10.5. Structural Equation Modelling

Structural equation modeling (SEM) is a statistical method that integrates factor analysis and regression to analyze the interactions between different constructs or variables (Hair et al., 2010). SEM is chosen for several reasons:

- The tool possesses the capability to assess many interconnected relationships and analyze the effects of several independent variables, each having distinct consequences on a dependent variable. In another equation, the dependent variable can function as an independent variable. This allows for the examination of various and interconnected dependency connections (Hair et al, 2010). Structural Equation Modeling (SEM) assesses the theory and assumptions while establishing the model (Tabachnick et al., 2013). Thus, it may examine the connections between the collection of brand knowledge components and brand experience, which are independent variables, on brand preference as a dependent variable. Next, it quantifies the influence of brand preference as a separate variable on the intention to repurchase a brand.

- Structural equation modeling (SEM) enhances the statistical estimate of correlations between constructs by including latent variables, hence decreasing measurement errors (Hair et al., 2010). The AMOS v.18 program is utilized for doing structural equation modeling. Thus, the measurement and structure are depicted through the use of a graphical interface. While LISREL is often used and considered synonymous with SEM, AMOS is becoming more popular because to its use of a graphical interface for all instructions instead of syntax or computer codes, making it more user-friendly (Hair et al., 2010).

5.4.10.5.1. Measurement Model

The measurement model delineates the indicators for each concept and evaluates the validity of the model via confirmatory factor analysis (CFA). The validity of the measurement model relies on attaining satisfactory levels of goodness of fit and evaluating the construct validity (Hair et al., 2010). The issue of model fit arises after the model has been specified and estimated in order to assess the degree of

similarity between the observed covariance matrix and the estimated covariance matrix (Tabachnick et al., 2013). The goodness of fit indices may be categorized into three groups: absolute fit indices, incremental measurements, and parsimony measures (Hair et al., 2010).

Absolute fit indices provide a straightforward and precise measurement of how well the defined model aligns with the observed data (Hair et al., 2010). Table 5.12 displays the various measures of absolute fit indices that were utilized in this investigation.

Table 5.12: Absolute fit indices

Absolute fit indices	Illustration
Chi-square (χ^2)	The basic statistical measure of Structural Equation Modeling (SEM) measures the discrepancy between the observed and predicted covariance matrices (Hair et al., 2010)
Goodness-of-fit (GFI)	The fit measure is a metric that is responsive to the size of the sample. It has a range of values from 0 to 1, where a larger value indicates a better fit (Hair et al., 2010)
Root mean square error of approximation (RMSEA)	The index is a parsimony-adjusted approximation of the non-central chi-square distribution. RMSEA quantifies the level of error and considers the size of the sample. The index is a measure of the lack of fit; thus, lower numbers approaching 0 indicate a better fit (Kline, 2005).
Standardised root mean residual (SRMR)	SRMR converts both the observed and estimated covariance matrices into correlation matrices. The mean absolute correlation residual is calculated by subtracting the estimated correlation from the observed correlation. RMSEA is an index that measures the degree of misfit in a model (Kline, 2005).
Normed Chi-square	The term "χ^2/df" refers to the ratio of the chi-square value to the degree of freedom. A model is considered to have a good fit when the ratio is 3:1 or below (Hair et al., 2010).

Table 5.13: Incremental fit indices

Incremental fit indices	Illustration

Tucker-Lewis index (TLI)	The analysis takes into account the complexity of the model and compares the normed chi-square values for the estimated model to the null model. The value of the model goes from 0 to 1, with higher values approaching 1 indicating a strong match (Hair et al., 2010).
Comparative fit index (CFI)	The method utilizes a non-central chi-square distribution with non-centrality parameters. The index is standardized, ranging from 0 to 1. Higher values, closer to 1, indicate a more optimal model fit (Tabachnick et al., 2013).

Incremental fit indices assess the estimated model by comparing it to a null model, which serves as an alternative baseline model (Hair et al., 2010). Table 5.13 displays many commonly utilized metrics of incremental fit indices employed in this investigation.

Parsimony fit indices can be defined as the ratio of the degrees of freedom of a model to the total degrees of freedom of the model being used (Hair et al., 2010). Table 5.14 displays a selection of commonly employed metrics of parsimony fit indices utilized in this investigation.

Table 5.14: Parsimony fit indices

Parsimony Fit Indices	Illustration
Adjusted goodness of fit index (AGFI)	The model complexity is taken into account by changing the Goodness of Fit Index (GFI) based on the ratio of degrees of freedom of a specific model to the total degrees of freedom of all available models (Hair et al., 2010).

After specifying the model and confirming its strong fit using fit indices, it is necessary to evaluate its construct validity. Convergent validity and discriminant validity are used to measure construct validity (Hair et al., 2010). Convergent validity refers to the situation where the indicators assigned to assess a certain component demonstrate high levels of loading (Kline, 2005). Discriminant validity pertains to the extent of differentiation between two conceptions (Hair et al., 2010).

5.4.10.5.2. Structural model

Once the validity of the measurement model has been assessed, it is transformed into the structural model by establishing the links between constructs according to theoretical principles. The hypotheses are represented by the designated connections between constructs. The structural model advances from establishing the relationship between the hidden constructs and observed variables in the measurement model to a more complex stage, where the attributes and strength of the interactions between constructs are determined (Hair et al., 2010). In a nutshell, it transits from employing Confirmatory Factor Analysis (CFA) to utilizing Structural Equation Modeling (SEM) for the purpose of hypothesis testing.

5.4.10.6. Multi-level modeling (MLM)

The study employed MLM due to the hierarchical or nested structure of the data. MLM takes into account the variability in regression slopes, which addresses the issue of homogeneity found in traditional structural equation modeling (SEM). This approach allows for simultaneous consideration of data at both the customer and brand levels, while also accounting for interactions between these levels. Also, MLM avoids the misspecification of the model and the bias in standard errors that can arise from treating independent observations as unrelated (Hox, 2010) and provides more accurate estimation of standard errors, significance levels, and confidence intervals compared to traditional SEM. The hypotheses can be tested by examining direct effects at both the customer level (level 1) and brand level (level 2), taking into account the interdependencies within the data.

5.5. Qualitative research - Delphi technique

The Delphi procedure is a commonly employed and acknowledged approach for collecting data from respondents who possess specialized knowledge in their respective fields. The approach is formulated as a collective communication

process that seeks to attain a consensus on a particular real-life matter. The Delphi process has been employed in diverse areas of research, including program planning, needs assessment, policy determination, and resource utilization. Its purpose is to generate a comprehensive set of alternatives, uncover underlying assumptions, and establish correlations among judgments on a topic that encompasses a broad range of disciplines. The Delphi methodology is an effective way for fostering consensus by utilizing a series of questionnaires distributed across numerous rounds to gather data from a panel of chosen participants. When developing and performing a Delphi research, it is important to consider subject selection, time constraints for conducting and finishing the survey, the potential for low response rates, and the risk of accidentally influencing input from the responder group.

The Delphi procedure, pioneered by Dalkey and Helmer (1963) at the Rand Corporation in the 1950s, is a highly regarded and commonly employed approach to reaching consensus among experts on real-world knowledge within certain subject domains. The Delphi technique is a group communication process that involves detailed examinations and discussions of a specific issue. It is based on the idea that multiple heads are better than one. The technique is used for goal setting, policy investigation, and predicting future events. Conventional surveys aim to determine the current state of affairs, while the Delphi approach seeks to explore potential future scenarios or desired outcomes. Delphi has been utilized in several domains within the literature, including program planning, requirements assessment, policy decision, and resource usage. According to Delbecq et al. (1975), and Hsu and Sandford (2007). the Delphi approach can be employed to accomplish the subsequent objectives:

1. To ascertain or formulate a spectrum of potential program possibilities;

2. To investigate or reveal underlying assumptions or knowledge that result in varying conclusions;
3. To gather information that might lead to a consensus among the group of respondents;
4. To establish a connection between well-informed opinions on a subject that covers several fields of study.
5. To enlighten the group of respondents on the different and interconnected parts of the issue (p. 11).

In theory, the Delphi process can be iterated indefinitely until an agreement is reached. Nevertheless, Custer et al. (1999) argue that in most circumstances, three iterations are typically enough to gather the necessary information and achieve a consensus. The subsequent discourse, meanwhile, offers instructions for a maximum of four repetitions to aid those who opt to employ the Delphi process as a method of gathering data, in cases when it is deemed necessary or advantageous to have more than three iterations.

Round 1: The Delphi approach typically starts with an unrestricted questionnaire.
Round 2: During the second round, each participant in the Delphi study is given a second questionnaire. They are then asked to evaluate the items that have been summarized by the investigators, using the information supplied in the first round.
In Round 3, each Delphi panelist is given a questionnaire containing the items and ratings from the previous round. Subsequently, individuals are prompted to either modify their assessments or present justifications for their disagreement with the collective opinion.

Round 4: In the fourth and typically last round, the panelists are given a list of the remaining things, together with their ratings, any differing viewpoints, and the ones

that have reached a consensus. This stage offers participants a final chance to amend their decisions. The number of Delphi iterations is mostly determined by the level of consensus desired by the investigators and can range from three to five (Ludwig, 1994).

To summarize, the Delphi approach offers a versatile and adaptive tool for gathering and analyzing data for research, assessment, fact-finding, issue investigation, or uncovering knowledge about a given topic. Hsu and Sandford (2007) suggests that prior to commencing a Delphi research, it is crucial to carefully analyze the selection of subjects and the time constraints for conducting and finishing the survey. It is important to incorporate extra measures in the research design and implementation to address poor response rates, unintended bias in feedback, and the polling of panelists who may have little understanding on the issue instead of seeking their expert opinions. The Delphi approach is a valuable data collecting methodology that has been and will continue to be widely used in many applications. It is particularly useful for gathering information from individuals who have deep expertise and experience in a certain field, allowing for real-time and real-world insights.

In the current thesis, both the two empirical studies were conducted by adopting the quantitative method. Nevertheless, for verifying the hypotheses and results, Delphi technique was adopted and both the studies were taken through the team of ten experts.

5.6. Ethical considerations

Business research ethics encompass a set of moral principles and norms that govern the behavior and actions undertaken during the entire research process, beginning from its first phase (Sekaran, 2003). The ethical code of conduct should mirror the

behavior of all individuals involved in the research endeavor, including the researcher, participants, and moderator (Sekaran, 2003). Churchill (1995) distinguishes between the ethical and legal factors. Ethics surpass law in terms of being proactive and all-encompassing; certain behaviors may be lawful but lack ethical justification. Ethics is underpinned by moral values, social duty, the ability to anticipate damage, and the desire to protect individuals from harmful behaviors.

The ethical standards were carefully reviewed at every phase of the investigation, taking into account the persons involved in each phase.

5.6.1. Prior to commencing the investigation:

This step involves outlining the researcher's strategy for adhering to scientific methodologies in order to address the research inquiries. Additionally, it entails making projections regarding the financial and temporal constraints of the study, the originality and advantages of the subject matter, and the accessibility of relevant information (Hair et al., 2003). Consequently, the researcher dedicated time to adequately prepare for the research by thoroughly examining the literature utilizing the resources made accessible by Brunel University.

5.6.2. Throughout and following the research

The initial stage involves planning for the study design, establishing the appropriate research technique, and commencing the data gathering phase. In this phase, the researcher examines the ethical connection with participants, guided by certain ethical standards (Bryman and Bell, 2011). The principles are categorized into four distinct areas: (1) Participants must not be subjected to any form of harm, including physical harm, prohibited actions, or negative impact on their future careers. (2) Informed consent must be obtained from participants, with the researcher clearly stating the purpose of the study and allowing participants to freely choose whether

to participate or not. (3) Participants' privacy must not be invaded, and the researcher must explicitly state this before seeking their cooperation. (4) Deception, which involves altering or concealing the true purpose of the research, is strictly prohibited. Prior to commencing the field research, it is imperative to acquire official clearance from the Research Ethics Committee, as mandated by the university's regulations. Consequently, the researcher completed the necessary ethical documentation in order to obtain clearance from the research ethics committee prior to data collection. The university's ethical guidelines ensure the safety of participants in several aspects, including the limitation on utilizing volunteers under the age of 18. In this study, data is gathered through the utilization of focus groups and a survey. Therefore, the researcher adheres to the process of organizing focus groups, which includes selecting a suitable time and location, as well as obtaining permission for audio recording. Furthermore, the cover page of the questionnaire includes a statement outlining the primary objective of the study, as well as the researcher's pledge to maintain the confidentiality of the data and utilize it solely for research reasons. In addition, the participants were notified that their participation and provision of personal data were optional. However, they were advised that the personal details would be used to calculate statistical percentages for the entire sample, but not on an individual basis.

The ethical issues persist throughout the study process, extending beyond the stages of data gathering and interpretation. The scope of its use encompasses both the process of creating and distributing information. It is crucial that data is evaluated and published accurately, free from any kind of contamination, following thorough analysis (Bryman and Bell, 2011). Prior to submission, it is essential to thoroughly review and address any concerns pertaining to plagiarism and referencing.

5.7. Conclusions

This chapter provides a concise and explicit overview of the intended research design for conducting this investigation. The research adheres to the post-positivism ideology as it is grounded in theory and maintains the conviction that social actors have a significant role in influencing reality. This philosophy enables the researcher to approach reality more closely. It remains impartial, but it interprets reality by considering social conditioning in order to challenge the existing state of affairs. The primary objective is to elucidate the phenomena within a specific context and is receptive to critical realism. The methodological technique involves revisiting the researched phenomena in its natural environment in order to confirm the theoretical ideas. Thus, this philosophy employs quantitative methodologies.

Quantitative research approach is used for this study, wherein a cross-sectional survey design is employed for data collection in two waves. In the first wave, data collection was done by administering questionaires to the industry experts, who provided information on the current cross channel integration levels of these manufacturer-sponsor consumer brands. On collection of this data related to industry expert, a professional network of the author along with the social media was deployed. Further, snowball sampling strategy was adopted to recruit industry experts across various industry and consumer product categories. In the second wave, data collection by administering questionnaires to the consumers of the brands for which industry experts have already provided responses. On data collected from the consumers, the evaluation of the content validity and reliability of the survey instrument is carried out in a preliminary research. A non-probability, convenience sampling strategy is employed since a sampling frame is not accessible. Data is gathered from individuals through the use of self-administered surveys by personally approaching them at various geographies and institutions to collect the online response through e-devices such as mobiles, laptops, overhead

projectors, etc. The minimum sample size required for this analysis is 300, as defined by the statistical technique's criteria. This, first wave, is related to the data collection from consumers of various manufacturer-sponsor brands across various product categories.

The data analysis phase consists of three parts. The first step involves doing data cleansing, validating the assumptions of multivariate approaches, conducting factor analysis, and calculating descriptive statistics. The data analysis at this stage is performed using SPSS v.25, and IBM SPSS AMOSv20.0.0 software. Common method bias test was conducted on the data obtained from the consumer and found that the bias doesn't exist as total variance explained by one factor is less than 50%. Non-response bias test is not required to be done in this study as is applicable where the data is collected through postal, and our data collection is based on the personal interaction where all approached provided their responses. This is applicable for both the waves, that is for consumer data and industry expert data, as we personally collected the data from the respondents after giving a brief introduction and the objective of the data collection. None of the respondent regretted the same.

In the second phase, to identify cluster nature of data, inter-class correlation and design effect calculation was carried out through excel-based program developed by Torsten Biemann (University of Mannheim, Germany), and Michael S. Cole (Texas Christian University, USA).

Further endogeneity test was carried out to identify presence of omitted variables, which was done using REndo package in R.

In the third phase, hypothesis testing, is conducted through the use of structural equation modeling, utilizing the IBM SPSS AMOSv20.0.0 and Mplus 7.11. The

measurement model's validity is assessed and subsequently converted into a structural model to test hypotheses using CFA.

This chapter serves as a comprehensive and organized manual for selecting techniques of gathering and analyzing data, specifying the study's timeframe and environment, and providing a rationale for the chosen approach. This chapter yields many discernible conclusions:

- The research primarily follow quantitative method to uncover the relationships in the proposed model. Although the quantitative techniques approach is widely used in marketing research and effectively addresses research problems, previous studies on cross channel primarily rely on data collected solely from consumers. This study collects two separate data, one from consumers and other from industry expert, which helps in improving external validity, and robustness of the model.
- The study examines the contextual comprehension in relation to the implementation of the concepts, the language employed in the questionnaire, and the method employed to engage participants. These factors aim to improve the strength and durability of the research, expanding its potential to be applied to a wider population and increasing the accuracy and consistency of the measurements.
- The study assesses the suitability of the convenience sample in connection to the issue being studied and the adequacy of the sample size for analytical purposes, in order to overcome its limitations. To depict the sample in relation to the population, the attributes of the population are compared to the distribution of the sample.

- The three-step technique of structural equation modeling allows for testing all possible patterns of coefficients. The process of re-specifying the model allows for enhancing the fit of the model. Therefore, the data analysis approach has significant promise for the construction and verification of theories, as well as for construct validation.
- The analysis step also incorporated test for checking nested nature of the data, and hence carrying out multi-level modelling. By employing a two-level multilevel design, we were able to distinguish between brand-controlled channel integration and the customer's purchase journey. Multi-level modeling (MLM) takes into account the variability in regression slopes, which addresses the issue of homogeneity found in traditional structural equation modeling (SEM). This approach allows for simultaneous consideration of data at both the customer and brand levels, while also accounting for interactions between these levels. Also, MLM avoids the misspecification of the model and the bias in standard errors that can arise from treating independent observations as unrelated and provides more accurate estimation of standard errors, significance levels, and confidence intervals compared to traditional SEM.

Chapter Six

Data Analysis and Survey Results

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6.1. Introduction

This chapter provides an analysis of quantitative data analysis gathered in the primary survey utilizing the updated questionnaire for both; expert and consumer. On consumer data, analysis is performed in seven primary stages, leading to the ultimate outcomes of hypothesis testing. On expert data, calculation is conducted through for multivariate analysis. These calculated data on brand cross channel integration level is taken for hypothesis testing for the study with multivariate approach.

On consumer data, the initial two stages involve doing basic data screening and assessing the assumptions of multivariate analysis methodologies. Subsequently, the data is tested for common method bias. Thereafter, both exploratory and confirmatory factor analyses are performed, followed by the inter-class correlation testing. Thereafter, together with the calculated data for brand cross channel integration level data, endogeneity testing is done. Once it is established that the influence of omitted variable is absent, then we move towards hypothesis testing, which is done through multi-level modelling as the test on inter-class correlation informed presence of nested data. The structure of this chapter is as follows. Initially, let's discuss the pilot research and its findings. Furthermore, a detailed depiction is given of the primary characteristics of the survey sample. The following sections outline the phases of data analysis in a sequential manner, and is done study-wise. This means that the sequential data analysis shall be done based on separate studies undertaken in this thesis. The discussion of the study adopted multivariate approach shall be done. Section 6.4 provides an overview of the outcomes of data cleaning and screening. Section 6.5 examines the assumptions of the multivariate techniques. Section 6.6 presents the findings of the exploratory factor analysis and reliability assessment, utilizing Cronbach's alpha. In this section, common-bias test is also conducted before EFA and inter-class correlation

test is done after reliability assessment. Section 6.7 discusses Ordinary multiple regression analysis and Multilevel modeling. Lastly, Section 6.8 presents model fitness test, and the endogeneity test before testing the hypotheses through multilevel structural equation modeling. Conclusions on the data analysis are given at the end of this chapter, and through the section 6.9.

6.2. Pilot Study

The pilot test is an essential stage in the process of developing a scale, as explained in Chapter four (Churchill Jr, 1979). The pilot research intends to evaluate the content and face validity of the questions, as well as test the reliability of the assessment items using Cronbach's alpha (Churchill Jr, 1979; Hair et al., 2006). Frequently, the ideas of face and content validity are used interchangeably without distinction, but there are some minor differences between them. Content validity is the extent to which the items of a measure accurately represent the theoretical content domain of a concept (Hardesty and Bearden, 2004, p.99). In order for the questions to possess content validity, they must also exhibit face validity. Face validity refers to the extent to which respondents or users perceive that the items of an assessment instrument are suitable for the intended construct and assessment objectives (Hardesty & Bearden, 2004). Mitchell (1996) distinguishes between the two based on the panel that is accountable for the evaluation. Content-validity is evaluated by a panel of specialists, whereas face-validity is assessed by non-experts. The predominant approach for evaluating content validity involves utilizing an applied technique to pre-test questionnaires, led by a comprehensive set of definitions for each component. Therefore, the expert assesses the survey's quality, verifies the questions, and examines the potential ambiguity of some items that may need to be removed (Hardesty and Bearden, 2004; Saunders et al., 2012). The criterion employed is the removal of any item deemed unrepresentative or of low quality by any judge, as suggested by Hardesty and Bearden (2004).

The survey and the list of definitions of the research components were forwarded to a panel of ten academic experts, for independent evaluation. We adopted to the item rating task to access content adequacy, following the third step in the scale development process as suggested by Mackenzie et al. (2011). So, these experts acted as a rater who were requested to rate the extent to which each item captures each aspect of the construct domain using a five point Likert-type scale ranging from 1 (not at all) to 5 (completely). Items with the average rating of 3 and above were retained and others deleted. The deleted items are enlisted in the table 6.1. So, in all, eithteen items were deleted back on the raters provided by the expert.

Table 6.1: List of items deleted after "access content adequacy" test

Construct	Questinnaire items	Count
Brand Awareness	CPV-BA7: I observe a clear and visible association of brand names (including logos and slogans) across channels	**1**
Trust	CPV-T1: Shopping across channel of the brand would be safe as they provide same information across channels	**3**
	CPV-T4: I am prepared to give private information to the brand	
	CPV-T5: It is not a problem to pay in advance while purchasing products from the brand on any of their channels	
Perceived risk	CPV-R2:I would suffer a loss when I transact with this brand (Unlikely … Likely).*	**2**
	CPV-R5: The loss I could suffer when I transact with this brand would be (Unimportant to me … Important to me).*	
Convenience	CPV-C4: I must expend a lot of energy to complete transaction of any nature with this brand	**2**
	CPV-C8: There are different ways of completing my purchase journey	

Perceived Control	CPV-Cont3: I had flexibility in completing purchase journey in-full or part, while using various channel of the brand	**1**
Ubiquitous Personalization	CPV-UP3: I shall change preference for the brand only when I get same kind of personalized 'synergized-channel services' during my purchase journey from that brand	**1**
Seamless Experience	CPV-SE4: This brand does not appeal to my senses*	**7**
	CPV-SE6: I do not have strong emotions for this brand	
	CPV-SE8: This brand stimulates my curiosity and problem solving	
	CPV-SE10: This brand does not make me think	
	CPV-SE11: I engage in physical actions and behaviours when I use this brand	
	CPV-SE12: This brand results in bodily experiences	
	CPV-SE13: This brand is not action oriented ’	
Customer Perceived Value	CPV2. This brand's cross channel integrated service fell short of my expectations*	**1**
Count of deleted items		**18**

Regarding the design and structure of the questionnaire, many recommendations were deliberated upon to enhance its user-friendliness and attractiveness, hence facilitating participants' responses. The first step is to incorporate the logo next to the brand name, and product image at the top of the questionnaire so that the respondents can easily connect with the brand and product for which questions are asked. Furthermore, it is important to provide clear and precise titles for the questions. Furthermore, on receipt of the feedback customized questionnaire were designed for individual brands for which the questionnaire were developed. As the unit of measurement is brand, data collection for various brands were desired. Hence, the questionnaire designed was not common across brands, but were customized made to specific ask every questions for that specific brands only.

Similar design was adopted for both; consumer-oriented questionnaire, and industry expert-oriented questionnaire.

Sample consumer-oriented questionnaire for one such brand is provided below, as Table 6.2 for the study. Similarly, sample industry expert-orient questionnaire for one such brand and product category is also provided, as Table 6.3.

Table 6.2: Consumer-oriented sample questionnaire for "OGeneral" brand and "Air conditioner" product category

Question – items	**Code**
I am always aware of 'OGeneral' Air conditioner through my exposure to their various channels (Online & Offline)	CPV-BA1
Characteristics of 'OGeneral' Air conditioner come to my mind quickly when I encounter it through various channels (Online & Offline)	CPV-BA2
When it comes to (product or service offered by this brand), I can immediately recall 'OGeneral' Air conditioner	CPV-BA3
I can recognize 'OGeneral' Air conditioner among other competing brands	CPV-BA4
I can quickly recall the symbol or logo of 'OGeneral' Air conditioner	CPV-BA5
I am aware that 'OGeneral' Air conditioner is present across channel (Online & Offline)	CPV-BA6
I feel safe in my transactions with 'OGeneral' Air conditioner on any individual channel	CPV-T1
I would trust online & offline shopping with 'OGeneral' Air conditioner	CPV-T2
I trust 'OGeneral' Air conditioner to keep my personal information safe	CPV-T3
I would suffer a loss when I transact with 'OGeneral' Air conditioner	CPV-R1
I would suffer a loss when I transact with 'OGeneral' Air conditioner	CPV-R2
To me, the loss I could suffer when I transact with 'OGeneral' Air conditioner would be	CPV-R3
To me, the loss I could suffer when I transact with 'OGeneral' Air conditioner would be	CPV-R4
It takes very little time to complete transaction of any nature with 'OGeneral' Air conditioner during complete or part of purchase journey	CPV-C1
I can receive the product and service as soon as possible while transacting with 'OGeneral' Air conditioner	CPV-C2

I get information, products and services, and resolution to the problems at fastest possible pace with 'OGeneral' Air conditioner	CPV-C3
It is not strenuous to complete transaction of any nature with 'OGeneral' Air conditioner and get the product & service	CPV-C4
OGeneral' Air conditioner is a easy-to-deal with organization	CPV-C5
OGeneral' Air conditioner allows flexibility during purchase journey	CPV-C6
I can decide how I want to interact with 'OGeneral' Air conditioner in my purchase journey	CPV-C7
Completing the purchase journey in-full or part using various channel of 'OGeneral' Air conditioner, in any sequence or order was entirely within my control	CPV-Cont1
I had to follow a set procedure to use channel service of 'OGeneral' Air conditioner for my needs	CPV-Cont2
I believe there was sufficient information provided to help me by all across channels of 'OGeneral' Air conditioner	CPV-Cont3
I believe there was information provided by 'OGeneral' Air conditioner that helped me find everything I needed to carrying out my activity in purchase journey	CPV-Cont4
There were clear directions provided through various integrated channels of 'OGeneral' Air conditioner for me to help during my purchase journey	CPV-Cont5
I believe I had a lot of choice as to which combination of channels to use for carrying out my purchase journey while dealing with 'OGeneral' Air conditioner	CPV-Cont6
I had a great deal of choice in which combination of channels to use for my purchase journey while dealing with 'OGeneral' Air conditioner	CPV-Cont7
I believe I was given the option of channels to choose from during my purchase journey with 'OGeneral' Air conditioner	CPV-Cont8
OGeneral' Air conditioner offers me the kind of channel service that smooth transition across it is possible to satisfy my specific needs during my purchase journey	CPV-UB1
OGeneral' Air conditioner offers me the kind of smooth-transitioning channel services that I couldn’t find with another brand	CPV-UB2
During my purchase journey with 'OGeneral' Air conditioner, I can move freely across its various channels	CPV-SE1
I find 'OGeneral' Air conditioner interesting in a sensory way	CPV-SE2
OGeneral' Air conditioner makes a strong impression on my visual sense or other senses	CPV-SE3
OGeneral' Air conditioner induces feelings and sentiments	CPV-SE4
OGeneral' Air conditioner is an emotional brand	CPV-SE5

I engage in a lot of thinking when I encounter with 'OGeneral' Air conditioner	CPV-SE6
I feel that 'OGeneral' Air conditioner is appealing to me	BP1
I like 'OGeneral' Air conditioner more than any other brand in the product category	BP2
OGeneral' Air conditioner is my preferred brand over any other brand in the product category	BP3
When it comes to making a purchase, 'OGeneral' Air conditioner is my first preference in the product category	BP4
I prefer to purchase 'OGeneral' Air conditioner to other brands	BL1
I like the 'OGeneral' Air conditioner	BL2
I intend to continue buying 'OGeneral' Air conditioner	BL3
Overall, 'OGeneral' Air conditioner will be my first choice	BL4
I will recommend 'OGeneral' Air conditioner to other people	BL5
Taken everything together, I consider cross channel integrated service of 'OGeneral' Air conditioner useful	CPV1
Cross channel integration services I get from 'OGeneral' Air conditioner are excellent value	CPV2
The overall value I get from the Cross channel integratio services of 'OGeneral' Air conditioner is worth my money and effort	CPV3
What is your age (in years)? 1. 18-24 2. 25-34 3. 35-49 4. 50-65 5. more than 65	CPV-D1
What is your highest level of education? 1. upto 8th Grade 2. upto 10th Grade 3. Graduate 4. Post Graduate 5. Doctorate	CPV-D2
What is your gender? 1. Male 2. Female 3. Other 4. Prefer not to say	CPV-D3

What is your monthly income? 1. Less than Rs.25,000/- 2. Rs.25,000/- to Rs.59,999/- 3. Rs.60,000/- to Rs.149,999/- 4. Rs.150,000/- to Rs.3,99,999/- 5. Rs.400,000/- to Rs.999,999/- 6. Rs.1,000,000/- to Rs.2,499,999/- 7. more than equal to Rs.2,500,000	CPV-D4
What is your family size? 1. upto 3 2. 4 to 6 3. more than 6	CPV-D5

Table 6.3: Industry expert-oriented sample questionnaire for "Raymond" brand and apparel and fashion" produt category

Name of the Expert
Does 'Raymond' Apparel & Fashion has presence in different channels (website, catalog, kiosks , mobile, social media, call center)?
Does 'Raymond' Apparel & Fashion has different assortment policies in different channels?
Does 'Raymond' Apparel & Fashion has different brand names in different channels?
Does 'Raymond' Apparel & Fashion has different price policies in different channels?
Does 'Raymond' Apparel & Fashion provides different kinds of service in different channels?
Does 'Raymond' Apparel & Fashion aligns marketing message across channels?
Does 'Raymond' Apparel & Fashion has integrated marketing communication across channels?
Does 'Raymond' Apparel & Fashion provide access to online inventory and does online orders fulfilled by staff in-store?
Does 'Raymond' Apparel & Fashion allows online consumers to browse the inventory in-store?
Does 'Raymond' Apparel & Fashion allows buying online and return in-store?
Does 'Raymond' Apparel & Fashion allows click and pick-up in-store?
Does 'Raymond' Apparel & Fashion allows click-to-call?
Does 'Raymond' Apparel & Fashion allows linkage between mobile app and store?
Does 'Raymond' Apparel & Fashion aligns assortment across channels?
Does 'Raymond' Apparel & Fashion aligns loyalty program across channels?

Does 'Raymond' Apparel & Fashion aligns price across channels?
Does 'Raymond' Apparel & Fashion aligns sales promotion across channels?
Does 'Raymond' Apparel & Fashion aligns services across channels?
Does 'Raymond' Apparel & Fashion has centralized call center service across channels?
Does 'Raymond' Apparel & Fashion support and encourage changing organizational structure for adapting to the integration of different channels?
Does 'Raymond' Apparel & Fashion links incentive system to both online and offline sales?
Does 'Raymond' Apparel & Fashion integrates database of clients across channels?
Does 'Raymond' Apparel & Fashion integrates information systems across channels?
Does 'Raymond' Apparel & Fashion integrates logistics across channels?
Does 'Raymond' Apparel & Fashion integrates merchandise planning system across channels?
Does 'Raymond' Apparel & Fashion recruits talents with double competences in retail and digital commerce?
Does 'Raymond' Apparel & Fashion share knowledge across channels?

The face-validity of the questionnaire was assessed by a group of individuals who were not specialists in the field. These individuals, who were genuine respondents, were asked to provide feedback on the questionnaire's quality in terms of the clarity of its phrasing, instructions, questions, and layout. The respondents express their concerns on the length of the questionnaire, which was addressed through conducting “access content adequacy”. Also, based on the feedback, a brief introduction along with the purpose of collecting the response has been stated and explained during the personal collection of the responses. The typical duration for completing the questionnaire varies between 15 and 20 minutes.

The pilot research was carried out in March, 2021 utilizing a self-administered survey. The pilot research sample consists of 100 respondents, which falls within the recommended range of 10 to 100 as specified by Saunders et al. (2012). Only 36 replies are considered legitimate, while the rest are excluded owing to a significant quantity of missing data. The pilot research sample profile of 30 male and 6 female respondents, accounting for 83.33% and 16.67% of the total,

respectively. The age of the respondents spans from 18 to 69 years, with the majority (75%) falling between the 40 to 49 age group. The sample average age of the pilot research falls in the range between 40 and 49 age bracket and 97.2% of the respondents possess a bachelor's degree or above. Furthermore, the proportion of those with 1-3 family size were 58.3% and 4-6 were 38.8%, balance 2.7% above family size of 6. Regarding social status, 41.5% of the respondents were single, while 54.7% were married. There were about 50% who refused to disclose income, and around 20% declared monthly salary between 3 to 4 lacs INR.

The items were further purified by assessing their reliability, utilizing measures other than Cronbach's alpha. The value of alpha is influenced by the quantity of items and has the potential to provide deceptive outcomes (Field, 2005). In order to evaluate dependability, it is common to employ both the inter-item correlation and the item-to-total correlation, rather than relying just on a single measure (Hair et al., 2010). The inter-item correlation quantifies the correlation between items, where the degree of acceptability is set at 0.3 (Field, 2005; Hair et al., 2010; Pallant, 2020). The item-to-total correlation quantifies the degree of connection between the item and the overall score of the scale. The acceptable threshold for item-to-total correlation can be set at either 0.5 (Hair et al., 2010) or 0.3 (Field, 2005; Pallant, 2020). Cronbach's alpha is a statistical measure used to evaluate the internal consistency of a scale or questionnaire (Hair et al., 2010). In general, a desirable alpha number is considered to be 0.7 or above (Hair et al., 2010; Kline, 2005). However, during the early phases of research, it may be acceptable to have an alpha value of 0.5 or 0.6 (Churchill, 1979). Consequently, the item will be deleted if it fails to achieve the threshold of 0.3 for both the inter-item correlation and item-to-total correlation. Additionally, if the value of alpha falls below the prescribed thresholds or if its removal will improve the value of alpha, the item will also be deleted (Field, 2005).

Every individual items in the questions for all the focal constructs were inspected for the above criteria and found that all the prescribed values were met, that is, obtained value is above the threshold value of cronbach's alpha, inter-item correlation, and item-to-total correlation were met. So, with this we move ahead for the main survey.

6.3. Main study

6.3.1. Sample profile

The primary survey data was gathered within a three-six month timeframe commencing on April, 2022, utilizing the questionnaire provided in the last section. As mentioned in Chapter 5, Section 5.5.9, the current study relies on non-probability sampling, namely convenience sampling, due to the lack of a sample frame. This type of sampling is often employed in management and business studies (Bryman and Bell, 2007). Data for our study was collected through separate surveys conducted at different times, involving diverse participants. There's no influence of a common-method variance as we gathered data from multiple sources and at two different time points. The participants included industry experts providing insights on manufacturer-sponsor consumer brand cross channel integration level and consumers sharing information on perceived value, preference, and loyalty. The expert data was collected before the consumer data.

6.3.1.1. Industry expert data profile

Industry experts in India, with a minimum of 15 years of experience in sales, marketing, and/or distribution functions, were approached for data collection through various offline and online sources. The selection of brands for the study was based on the Top500 Fortune India list, obtained from the websites-link: https://sanver.com/blog/et-500-companies-in-india/ and

https://www.fortuneindia.com. Additional B2C (consumer) brands were considered based on the recommendations from various websites of repute. The chosen consumer brands represented diverse products categories of a consumer electronics, consumer electricals, mobile, hair-skin care, packaged foods, apparels-fashion, home appliances, and air conditioners. The criteria for choosing experts was such that, first, they should have adequate years of experience working in the industry/product category for which they are evaluating, second, they have developed an appreciation around omnichannel and are aware of the latest development happening in the omnichannel strategy in the industry they practice, and third, they understand each and every questions and are in the position to answer them to the accepted level of an accuracy. These criteria were met by a self-declaration at the start of the self-administered questionnaire. The experts were approached either personally or telephonically or through a social media messaging. Requests were made to experts to voluntarily participate in the brand evaluation process with a small note covering a brief introduction about the author, the objective of administering the questionnaire, and a google form questionnaire links. The author has made customized google forms for every focal brands, with each questions asking about that particular brand only. After a self-declaration, the questionnaire begins with the brand name, photograph of the product and brand, and the product category on which the questionnaire has been framed.

Once they agree to participate, the brief explanation of the questionnaire is provided. In most of the cases expert shall fill the questionnaire when they find time, offline and submit the filled-questionnaire at their convenience. In some of the cases they ask to stay as a standby so that the doubts can be clarified while they evaluate the brand and fill the questionnaire. Some of those who participated in the survey were industry veterans and others were very highly placed in the leading brands in the industry.

A 3x5 matrix approach was adopted to collect data, where each expert evaluated a maximum of 5 brands on their omnichannel transformation phase, and each brand was evaluated by at least 3 different experts.

Experts were approached through an offline, online and both the platforms by utilizing either a purely professional network portal, and/or an author's professional network of almost 3 decades as a practitioner. From the initial 121 experts approached for conducting evaluation of 106 shortlisted brands across 11 different categories. Ultimately, 56 unique experts agreed to respond, collectively evaluating 86 brands. All the responses were were in a usable condition and none were discarded and most of them were done through the personal interaction, wherein briefing and discussion was a simultaneious process. For exactly 50 brands, three or more responses were obtained from the experts. But, as the number of customer responses obtained for these brands exceeded the required threshold numbers for only 43 of them, we studied 43 brands (detail in table 6.3) with the following industry/number of brand/number of expert response details: air-conditioners/11/37; home appliances/5/21; consumer electronics/3/10; consumer electrical/1/3; mobile/7/25; hair-skin/8/28; packaged foods/7/34; apparels-fashion/1/3.

Product category wise list of 43 brands operating in India for which we obtained their cross channel integration level are as follows: air conditioner: Blue Star, Carrier, Daikin, Hitachi, LG, Lloyd, Mitsubishi, OGeneral, Panasonic, Samsung, and Voltas; mobile: Apple, OnePlus, OPPO, Redmi, Samsung, Vivo, and Xiaomi; home appliances: Electrolux, Godrej, Haier, Panasonic, and Samsung; Hair & skin care: Clinic Plus, Dove, Emami, Himalaya, Patanjali, Sunsilk, Tresemme, Vaseline; consumer electronics: LG, Samsung, Sony; Apparels & Fashion: Raymonds;

consumer electricals: Polycab; packaged food: Balaji, Britannia, ITC, Kissan, Lay's, Parle, Patanjali.

Some experts either regretted or did not respond to the request made. Majority of those who regretted did it citing reasons such as lack of information on either the focal brands or omnichannel strategy of the manufacturer consumer brand. Some regretted citing their signing of a non-disclosure agreements with their current employer, according to which they can't participation in any such surveys. Some were also hesitant to click any link including Google survey links, even when assurances were provided. Very few evaluated in the pen-paper format and submitted through social media by either scanning and/or photos. However, collection of data was through personal interaction, though through an online link based.

Table 6.4: Details on expert & consumer response to the focal product category & brand

Category	Number of Brands	Brand	Expert Response	Consumer Response
Air conditioner	**11**	Blue Star	3	58
		Carrier	3	55
		Hitachi	3	60
		LG	3	46
		Lloyd	3	58
		Mitsubishi	4	59
		OGeneral	4	55
		Panasonic	4	59
		Samsung	3	60
		Voltas	3	62
		Daikin	4	79
		Air conditioner	**37**	**651**
Home appliances	**5**	Electrolux	4	55
		Haier	6	56

		Panasonic	4	60
		Samsung	3	58
		Godrej	4	51
		Home appliances	**21**	**280**
Consumer electronics	**3**	LG	3	59
		Samsung	3	56
		Sony	4	61
		Consumer electronics	**10**	**176**
Consumer Electricals	**1**	Polycab	3	56
		Consumer Electricals	**3**	**56**
Mobile	**7**	OnePlus	3	57
		OPPO	3	62
		Redmi	4	61
		Samsung	4	57
		Vivo	3	61
		Xiaomi	3	73
		Apple	5	57
		Mobile	**25**	**428**
Hair and Skin Care	**8**	Clinic Plus	4	77
		Dove	4	50
		Emami	4	57
		Himalaya	3	61
		Patanjali	3	56
		Sunsilk	4	57
		Tresemme	3	46
		Vaseline	3	56
		Hair and Skin Care	**28**	**460**
Packaged food	**7**	Britannia	4	50
		ITC	4	53
		Kissan	6	49
		Lay's	4	52
		Patanjali	4	59
		Balaji	3	61
		Parle	9	56
		Packaged food	**34**	**380**
Apparels & Fashion	**1**	Raymond	3	71
		Apparels & Fashion	**3**	**71**
Total	**43**		**161**	**2502**

6.3.1.2. Consumer data profile

Responses from consumers were collected for only those brands and categories that were evaluated by experts. Participants were recruited from various sources and geographic locations, including an online consumer panel through a certified market research firm and author's network that includes various organization employees, school/colleges staffs, personal network, and social media connects. Most of the participants recruited were a combination of a personal, and professional network, including usage of a social media platform for recruiting unknown participants in India. Participants includes school teachers and administration-staffs, colleges professors, administrative-staffs, and in some cases students from the post-graduate programs. The use of a broad consumer panel was chosen to account for the influence of demographic factors on regressand (Ansari et al., 2008). The sampling frame was limited to internet users, as they represent potential online channel buyers and are more likely to be impacted by OMC. Consumers without internet access were excluded from the sampling process.

Convenience sampling was employed to collect responses, with each respondent participating exactly once. A total of 2,744 viable responses were collected for 53 brands, with 2,320 responses received for 43 brands that had more the threshold number of 40 responses per brand. Category/number of brands/number of consumer responses (respondents) details of the collected responses (as per Table 6.4) are as follows: air-conditioners/11/602; home appliances/5/255; consumer electronics/3/164; consumer electrical/1/56; mobile/7/404; hair-skin/8/435; packaged foods/7/342; apparels-fashion/1/62. The multi-level sample, comprising 43 brand groups, achieved adequate statistical power by surpassing the recommended 30-40 groups for testing a medium standardized effect (Scherbaum and Ferreter, 2009).

Prior to inputting the data into SPSS, the questionnaires underwent thorough scrutiny. Out of the 2,824 questionnaires obtained, only 2,744 were deemed viable. The remaining 80 were eliminated owing to a significant quantity of missing data arising from incomplete sections or missing pages. The structural equation modeling (SEM) employed in data analysis requires a minimum sample size of 300, as stated by Hair et al. (2010), Kline (2005), and Tabachnich et al. (2013). Hence, this quantity of useable questionnaires is deemed satisfactory. Regarding demographic characteristics, the majority of respondents (35.39%) were aged 25-34 years, 56.03% were graduates, 60.56% were male, 63.41% belonged to family sizes of 4-6, and 38.97% had annual incomes ranging from Rs. 25,000/- to Rs. 59,999/-. The sample exhibited reasonable diversity in terms of demographics. Table 5.10 displays the demographic information of the participants in the primary survey sample.

6.3.2. Sample selection bias

Utilizing a sample is a viable substitute for performing a survey on the complete population, as it is not feasible owing to limitations in size, time, and financial resources (Saunders et al., 2012). Using a census in research does not necessarily ensure better outcomes. When conducting a census, there is a high likelihood of encountering non-sampling mistakes, but employing a sample can yield more precise and accurate outcomes (Churchill, 1979). In order to ensure generalizability, it is essential for researchers to get a representative sample from the designated population (Saunders et al., 2012).

In order to accomplish this, it is crucial to analyze the quality of the sample and evaluate any potential bias it may have. According to Blair and Zinkhan (2006), there are three sources of sample bias: coverage bias, which happens when a certain segment of the population is excluded from the study; selective bias, which occurs

when certain groups are given higher or lower chances of being selected compared to others; and non-response bias, which arises from differences between respondents and those who choose not to respond or are unable to respond. The authors also state that non-response bias is more prevalent in non-probability samples, even when the response rate is high. Nevertheless, the non-response bias is only one factor contributing to sample bias and should not be the exclusive criterion for assessing the sample's quality (Blair & Zinkhan, 2006). Non-response bias can arise from missing replies owing to respondents' reluctance, incompetence, or ineligibility, as noted by Yu and Cooper (1983). Non-response is a prevalent issue in postal surveys (Armstrong & Overton, 1977). The authors propose three potential strategies to mitigate the impact of non-response bias: To reduce the amount of non-responses, gather responses from those who did not initially reply, or assess the impact of non-response. The method of identifying the impact of non-response bias relies on analyzing the temporal trend by comparing the responses of the earliest and most recent participants. Non-respondents are often seen as similar to the latter.

To mitigate non-response bias, it is advisable to enhance the study design and minimize the number of individuals who do not react during the initial stages of the process (Churchill, 1979). According to Yu and Cooper (1983), this is regarded as a successful method for evaluating its influence. Various criteria have been proposed to enhance the response rate, such as the attributes of the target audience, the design and length of the questionnaire, and the manner of contact.

According to Yu and Cooper (1983), the personal interview approach yields the highest response rates compared to telephone and postal surveys. According to Saunders et al. (2012), both telephone and personal interviews can provide response rates ranging from 50% to 70%.

The present study used a self-administered survey, allowing the researcher to influence and assist the participants in completing the questionnaire (Saunders et al., 2012). Furthermore, the researcher has the ability to inspire and foster enthusiasm among the participants. Sekaran (2003) states that the primary benefit of this survey method is its ability to get a high response rate and complete all necessary questionnaires within a short timeframe. The minimum number of target answers required is 300 due to the specific demands of the data processing approach, structural equation modeling. Throughout the data collecting period, a total of 2,824 valid questionnaires were gathered, surpassing the minimal need. Out of these, only 80 were deemed unfit for analysis, resulting in a final count of 2,744 valid and useable questionnaires for completing the analysis.

This study placed a high importance on the quality of the sample by thoroughly evaluating it before to conducting the field study, with the aim of reducing any potential sample bias. The questionnaire design was aesthetically pleasing to the responders, and the length of the questionnaire was also taken into consideration. During the data collecting process, the researcher adheres to the principles outlined by Churchill (1995) in order to enhance the response rate and minimize refusals. Once the data is gathered, the quality of the sample is determined by assessing the sample selection bias. This is done by comparing the frequencies of demographic characteristics of the respondents in the present research with the actual statistics from the census. Table 6.5 illustrates the disparity in age categories between the respondents in the sample and those in the census. Since there is no available information for respondents below the age of 15, the comparison will begin at the age of 18, since the respondents' age range starts at 18. The results demonstrate the optimal portrayal of certain age cohorts and the disparity in others. Also, exact comparison across the age brackets is not possible due to the non-availability of the

census data in line with those collected. However, we can compare the available age brackets and madke a judgement of whether the sample is a representative of the census or not. On comparing all the available age brackets, we can conclude that the sample seems to be around that of the census. Census inform that 37% of population lies in between 15 to 29, against which sample comprise of 28.6% (app.) between the age bracket of 18 to 24 years. This seems to be matching as the sample age bracket is the subset of the census age bracket, which has 37% against 28.6% of sample. Similarly, parallel can be drawn for other brackets except that above 50 years of age, which leads to the conclusion that the sample is a fair representation of census.

For the age bracket above 50 years, sample comprise of 7.16% and that of census above 60 years age bracket itself is much more of 13%. Nevertheless, this phenomenon might be attributed to the older generation's hesitancy to engage in research surveys. One possible explanation might be the nature of the product being studied and the context of omnichannel that require respond to be updated to the new and upcoming technology and the behavior of the new consumers. Consumer with age group above 50 make not have adopted to the online buying at the pace matching that of the younger generation. This may have limited these age group to stay away for participation. It is often seen that individuals over the age of 45 make up fewer than 10% of the entire sample size in research focused on technology items (Petruzzellis, 2010).

Table 6.5: Comparison between the age frequencies in sample and census

Age group	Census (2021)		Age group	Sample	
	Frequency (in crores)	Percentage		Frequency	Percentage
15-29 years	38	37%	18-24 years	663	28.58
			25-35 years	821	35.39

30-59 years	52	50%	35-49 years	670	28.88
> 60 years	14	13%	50-65 years	145	6.25
			> 65 years	21	0.91
Total	**104**		**Total**	**2320**	

Source: Deloitte report (June, 2023)

6.4. Data screening

Prior to conducting any analysis, it is necessary to scrutinize the data gathered for the primary survey. Data screening, sometimes referred to as data cleaning, is the procedure of identifying and rectifying problems in inputted data. This technique examines the inaccuracies resulting from the absence of data and the presence of outliers.

6.4.1. Missing data

Missing data refers to the values that are not accessible for one or more variables (Pallant, 2020). The consequences of missing data might vary from a decrease in the sample size to significant distortions in the data, resulting in skewed outcomes and ultimately reducing the generalizability of the findings (Tabachnick et al., 2013). Hair et al. (2010) propose a four-step process for verifying missing data and implementing a solution: The process has four steps: (1) identifying the nature of the missing data; (2) evaluating the scope of the missing data; (3) determining if the missing data is random or not; and (4) implementing the appropriate solution. There are two categories of missing data: ignorable missing data, which is anticipated as a result of the particular design of the data gathering process; and non-ignorable missing data. The survey instrument for the current study does not contain any portions of questions that are intentionally left unanswered. Hence, the data that is missing will be categorized as non-ignorable. The last stage involves assessing the magnitude and arrangement of the absent data for each individual

item, case, and the entire dataset. When evaluating the quantity of missing data, it is seen that at the individual item level, the missing data varies from 0.0 to 0.6%. Additionally, at the case level, only 33 cases contain missing data, with the degree of missing data ranging from 1 to 5%. So, actual data collected was 2502 and after omitting missing cases we were left with 2,469 responses.

According to Tabachnick et al. (2013), missing data that is less than 5% and occurs randomly is not considered a severe issue. According to Hair et al. (2010), if missing data for a variable or case is less than 10% and occurs randomly, it is unlikely to significantly impact the results. The present study has a minimal amount of missing data, which happens randomly and is determined by the insignificance of the Little MCAR test (Chi-Square= 888.841, DF=893, Sig. 0.533). Consequently, any solution may be used to address the issue; there are two fundamental methods for estimating missing data that are fully random: using only the available data and replacing the missing values. The complete case approach is straightforward and efficient, however it decreases the sample size (Hair et al., 2010; Tabachnick et al. 2013). Consequently, the act of substituting missing values is seen as a solution for handling missing data in order to incorporate all the observations in the analysis. In this technique, the missing values were replaced with the mean values of the variable, which were derived using valid replies.

6.4.2. Outliers

The second stage of data cleaning involves identifying outliers, which are data points that deviate significantly from the remainder of the dataset (Field, 2005). Extreme scores might manifest on a single variable (univariate) or on many factors (multivariate) (Kline, 2005). Tabachnick et al. (2013) emphasize the significance of identifying both univariate and multivariate outliers when analyzing data using structural equation modeling. Univariate outliers are identified by analyzing the

observations for each variable and identifying examples that fall beyond the maximum and lowest ranges (Hair et al., 2010). The initial step in identifying univariate outliers is transforming the original values in the dataset into standardized scores (Pallant, 2020). According to Hair et al. (2010), a standard score value more than 2.5 is considered a univariate outlier for small samples of fewer than 80. For bigger samples, the threshold is increased to 4. Tabachnick et al. (2013) state that instances with standardized values greater than ±3.29 are considered outliers, taking into account the sample size. In the present investigation, SPSS descriptive was used to construct standardized scores in order to identify univariate outliers. A cut-off value of ±3.29 was employed for this purpose. The data reveals that there are 96 instances where the values are much higher than the threshold. Additionally, there are instances where outliers are presence in more than one variables. This data is too big to be produced and not presented. However, these 96 cases were omitted from the main studies. Box plots may be used to visually locate univariate outliers, which are data points that deviate significantly from the rest of the data. Therefore, there is no need to make any changes to univariate outliers in order to bring them closer to the center of the distribution (Tabachnick et al., 2013).

The second approach involves detecting multivariate outliers using the Mahalanobis D^2 metric. The Mahalanobis distance is a statistical measure that quantifies the impact of each instance by calculating the distance in a multidimensional space between the case and the average value of all variables (known as centroids) (Kline, 2005). An inherent limitation of this approach is the lack of specificity in the evaluation, since it does not identify the specific component that contributes to the rise in the value of D^2 (Hair et al., 2010). The method used to identify multivariate outliers is by calculating the Mahalanobis distance, which is determined by the degree of freedom at conservative levels of

significance ($p<0.001$). The Mahalanobis score (D^2) is divided by the number of variables contained (df) to provide the Mahalanobis distance. This approach is described by Tabachnick et al. (2013). Establishing a threshold for identifying multivariate outliers through the use of Mahalanobis distances is a challenging task due to its susceptibility to the influence of both the sample size and the number of variables (Field, 2005). Nevertheless, Hair et al. (2010) proposed that the threshold values for small samples should be set at 2.5, while for big samples, they should be set between 3 and 4. Some individuals construct tables based on the number of variables and sample size (Barnett and Kewis, 1978), while others create tables using the degrees of freedom and level of significance to determine the critical values of chi-square. When the scores of Mahalanobis distance are compared to the critical values in the table, any instance with a higher value is classified as a multivariate outlier (Tabachnick et al., 2013.

In this work, the identification of multivariate outliers is done by calculating the Mahalanobis D^2 distance. A threshold value of D^2/df greater than 2.5 is used to determine if a data point is an outlier. Consequently, 194 cases were recognized as multivariate outliers, out of which 51 cases are common and exhibit univariate outlier characteristics. While these examples may not be unusual when considered individually, they possess unique combinations when several variables are taken into account. In addition, the calculated value of D^2 for these cases is higher than the crucial value of 39.252 at a significance level of $p<0.001$ as given by Tabachnick et al. (2013). The outcomes of multivariate outliers is too big to be presented here. However, summary of univariate and multivariate outlier is presented in table 6.6.

Table 6.6: Summary of missing data, outlier, and usage data for further studies

Description	Cases
Data collected initially	**2502**
Missing data	33
univariate outlier	96
multivariate outlier	194
common between the two outliers	51
Unique outlier	**239**
Net usage of data for further study	2230

In order to offer conclusive evidence of the removal of outliers, their impact was assessed using Cook's distance. The extreme situations possess values below one, thereby making them exempt from deletion (Pallant, 2020). As stated by Hair et al. (2010), it is recommended to keep outliers in the data. Otherwise, there is evidence to support their removal, as they are considered abnormal and not typical of any observations in the population. Furthermore, it is possible to include and account for outliers in the study without affecting the results. Nevertheless, the researchers chose to remove these identified outliers present in 239 cases the outliers in the present study for additional examination.

6.5. Testing the Assumptions of Multivariate Analysis

The multivariate analytic approaches rely on four essential assumptions: normalcy, homoscedasticity, linearity, multicollinearity, autocorrelation. We conducted multivariate analysis assumption test for normalcy, linearity, multicollinearity, and autocorrelation and found that the multicollinearity and autocorrelation were met and that of normality, and homoscedasticity assumptions were not met.

6.5.1. Normality Assumption

Assessing the normality of variables is an important stage in multivariate analysis. This involves screening the data to see if the variables follow a normal distribution. Several studies (Hair et al., 2010; Kline, 2005; Tabachnick et al., 2013) have emphasized the significance of this phase. Normality pertains to the form of the normal distribution of the metric variable and its correlation (Hair et al., 2010). Assessing the normality of a single variable can be done either visually or statistically, as suggested by Coakes et al. (2009), Pallant (2010), and Tabachnick et al. (2013). Failure to achieve normalcy can lead to invalid statistical tests, as the divergence from normal distribution is exceptionally great. An effortless and uncomplicated approach involves visually examining the form of a normal distribution and/or the normal probability plot. The histogram is utilized to assess the normality of a distribution. If a normal bell curve is superimposed over the distribution, including the central portion of the histogram as well as the two tails, it signifies normality (Pallant, 2020). While this approach may appear simple, it poses challenges when evaluating the normalcy of a small sample. The normal probability plot is a more dependable graphical depiction that compares the cumulative distribution of the actual data values with those of a normal distribution (Hair et al., 2010). The normal probability plot may be evaluated using a Q-Q plot. If the data points align closely to a straight line, it indicates that the distribution is normal (Coakes et al., 2009).

The visual examination of the graphical representations using Q-Q plots in the current study reveals that the values of all variables are tightly grouped around the linear trend line. However, in order to enhance confidence in the normality of the data, additional statistical tests for normality were employed. Pallant (2020) proposes three statistical tests to assess normality: the 5% trimmed mean, the Kolmogorov-Smirnov and Shapiro-Wilk statistics, and measures of skewness and

kurtosis. The 5% trimmed mean is a statistical metric that calculates the central tendency of a dataset while excluding the influence of extreme values. The mean of the distribution is calculated by removing the top and bottom 5% of scores (Coakes et al., 2009). By comparing the 5% timed mean with the mean huge difference, further tests of normalcy should be identified (Pallant, 2020). Negligible disparities were seen between the 5% trimmed mean and the mean for each variable; the values were almost identical.

The Klomogorov-Smirnov and Shapiro-Wilk tests, represented as the K-S test indicated as D, assess the normality of a sample by comparing its scores to a set of scores that follow a normal distribution with the same mean and standard deviation (Field, 2005; p.93). The lack of importance of the test suggests that it is an indication of normalcy. However, Coakes et al. (2009) argue that the Shapiro-Wilk test is specifically designed for small sample sizes of fewer than 100. An inherent limitation of employing this test is the elevated likelihood of getting statistically significant outcomes in extensive samples, which would suggest the departure from normality of the data due to a little deviation from the normal distribution (Field, 2005). Nevertheless, the K-S test is recognized for every variable. The findings indicate that the value of D(2021) varies between 0.174 and 0.215 at a significant level of $p<0.001$, as presented in Table 6.7. Thus, the K-S test does not satisfy the premise of normality, as stated by Shapiro and Wilk in 1965. This outcome is often observed in extensive samples (Pallant, 2020). Field (2005) suggests that non-normality might arise from minor deviations from normalcy that are nonetheless within an acceptable range. Skewness and kurtosis are employed to evaluate normality by characterizing the distribution's shape.

Table 6.7: Results of K-S test for normality

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Brand awareness	.183	2320	.000	.860	2320	.000
Trust	.188	2320	.000	.876	2320	.000
Perceived_Risk	.198	2320	.000	.876	2320	.000
Convenience	.174	2320	.000	.883	2320	.000
Perceived Control	.174	2320	.000	.871	2320	.000
Ubiquitious Personalization	.195	2320	.000	.905	2320	.000
Seamless Experience	.182	2320	.000	.884	2320	.000
Brand Preference	.186	2320	.000	.876	2320	.000
Brand Loyalty	.189	2320	.000	.867	2320	.000
Customer Perceived Value	.215	2320	.000	.871	2320	.000
a. Lilliefors Significance Correction						

Skewness pertains to the degree of symmetry in a distribution; specifically, it indicates if the distribution is imbalanced or pushed towards one side (Tabachnick et al., 2013). Skewness may be classified into two categories: positive skewness, which occurs when the distribution is pushed towards the left; and negative skewness, which occurs when the distribution is skewed towards the right (Hair et al., 2010). Kurtosis is a statistical measure that quantifies the degree of peakedness in a distribution (Tabachnick et al., 2013). Leptokurtic distributions are characterized by tall or peaked shapes, while platykurtic distributions have flatter shapes. Variables that follow a normal distribution have skewness and kurtosis values of zero. If positive or negative values are assigned to them, this shows a departure from normalcy. The allowable range of deviations is influenced by the size of the sample. In small samples of fewer than 30, even modest deviations might have significant consequences. However, in big samples of more than 200, these variations can be considered negligible (Hair et al., 2010). According to Kline

(2005), variables that differ by ±3 on the skewness and/or kurtosis might be considered to have a normal distribution. The generally accepted critical value for the z-distribution of kurtosis/skewness is ±2.58 (Hair et al., 2010). The variables' skewness and kurtosis, computed at both the construct level (Table 6.8) and item level (Annexure A), suggest that they are within the permissible range.

Although the brand awareness, and perceived control construct exhibits leptokurtic behavior with a kurtosis score of 2.732, and 2.761, respectively, it remains within the permissible range of less than ±3.00 at the construct level. Furthermore, when examining item-level scores, all are under acceptable except income demographics item that is at 3.425 individually. Also, as it is a control variable, we continue ahead with it. All the findings demonstrate the univariate normality of the variables.

Even if two or more variables exhibit univariate normality, it is still crucial to evaluate the normality of their combinations. According to Hair et al. (2010), it is

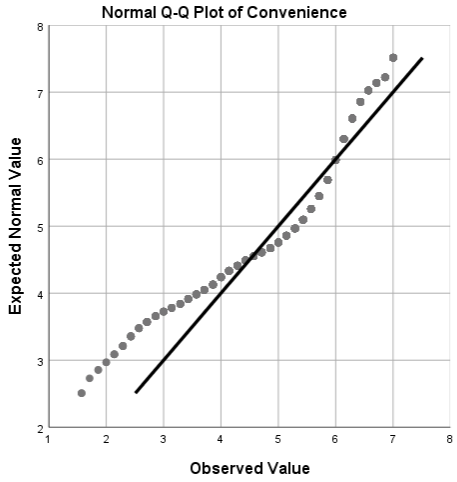
Table 6.8: Skewness and Kurtosis at the construct level

Constructs	Min	Max	Mean	Median	Mode	Std. Deviation	Variance	Skewness		Kurtosis	
								Statistic	Std. Error	Statistic	Std. Error
Brand Awareness	1	7	5.6	5.83	5.83	0.943	0.89	-1.656	0.051	2.732	0.102
Trust	1	7	5.538	5.67	6	1.025	1.051	-1.457	0.051	2.761	0.102
Perceived Risk	1	7	2.826	2.5	2	1.233	1.52	1.243	0.051	1.084	0.102
Convenience	1.6	7	5.49	5.71	5.86	0.904	0.817	-1.372	0.051	2.111	0.102
Perceived Control	1.8	15.8	5.508	5.75	6	0.933	0.871	-0.667	0.051	2.657	0.102
Ubiquitious Personalization	1	7	5.501	5.5	6	1.037	1.075	-1.07	0.051	1.129	0.102
Seamless Experience	1	7	5.478	5.83	6	0.953	0.908	-1.327	0.051	1.715	0.102
Brand Preference	1	7	5.449	5.75	6	1.069	1.142	-1.414	0.051	2.169	0.102
Brand Loyalty	1	7	5.512	5.8	6	1.054	1.11	-1.48	0.051	2.378	0.102
Customer Perceived Value	1	7	5.487	5.67	6	1.039	1.079	-1.388	0.051	2.014	0.102
Consumer Demographics	1	4.8	2.127	2	2	0.429	0.184	0.94	0.051	1.78	0.102
Valid N (listwise) = 2320											

assumed that a variable has univariate normalcy if it also has multivariate normality. However, the contrary is not always true.

To evaluate the multivariate normality, it is necessary to first evaluate the normality of each individual variable and then examine the normality of the distribution of the combinations of these variables (Kline, 2005). Evaluating the multivariate normality is more challenging compared to evaluating univariate normality (Hair et al., 2010).

Figure 6-1 Multivariate normal Q-Q plot of regression standardised residual



The Q-Q normality probability plot (Figure 6.1) demonstrates that all data points are around the straight line but does not align perfectly on it, indicating departures from normality. The multivariate normality assumption was assessed using Mardia's coefficient (Mardia, 1970) in AMOS.20.0.0. The analysis, presented in Annexure B, revealed a violation of the multivariate normality assumption. The results also indicate the presence of multivariate outliers, which explains the presence of multivariate non-normality (Byrne, 2001). According to Byrne (2001,

p.268), the majority of the data does not conform to the premise of multivariate normality.

6.5.2. Homoscedasticity Assumption

The second premise of multivariate approaches is homoscedasticity, which involves assessing the interdependence of interactions between variables (Hair et al., 2010). Homoscedasticity refers to the condition where the dependent variables exhibit uniform amounts of variation throughout the whole range of predictors. This concept is closely linked to the assumption of normalcy, as stated by Tabachnick et al. (2013). In order to establish a connection between the independent and dependent variables, it is imperative that the variance of the dependent variable values is uniform for every value of the independent variable (Hair et al., 2010).

Heteroscedasticity refers to the uneven variance among independent variables in a relationship. This can occur owing to the non-normality (skewed distribution) of variables or random error, as explained by Kline (2005), or it can be caused by the kind of variable, as discussed by Hair et al. (2010). We shall test heteroscedasticity using SPSS through plot and measurement. We plot unstandardized residuals on y-axis against unstandardized predicted values. To meet the assumption of heteroscedasticity, the unstandardized residuals should remain constant when unstandardized predicted values are increasing. The below is the scattered plot provide in figure 6.2. Though the graphs seems to be uniform, but the residuals seems to be changes when the predicted variable is changing.

Now, we conduct Breusch-Pagan test, which is recommended for continusous dependent and independent variables as in our case. The null hypothesis of Breusch-Pagan's test posits that there is no change in the residual values when the predicted values changes. Therefore, if Breusch-Pagan's test is not significant at a

p-value of 0.05 or above, it suggests that the assumption is valid and the residuals remains unchanged. In the present study, reputation and quality variables exhibit non-significant levels, p≥0.05, and emotional response and convenience exhibit significant levels, p< 0.05. as presented in the table according to Breusch-Pagan's test for equality of variance, as presented in Table 6.9 for model, and table 6.10 variable-wise. Thus, it may be concluded that the assumption of homoscedasticity has not been met.

Figure 6.2: Scatterplot of residual against the predicted values

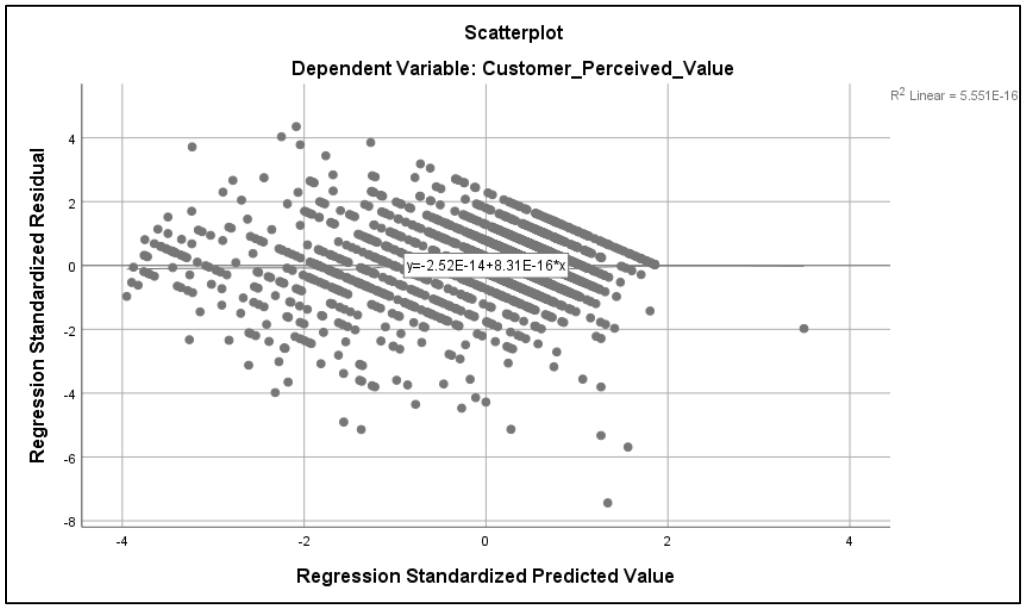


Table 6.9: Model statistics on heteroscadesticity

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1502.461	7	214.637	495.925	.000[b]
	Residual	1000.639	2312	.433		
	Total	2503.100	2319			
a. Dependent Variable: Customer_Perceived_Value						

b. Predictors: (Constant), Seamless_Experience, Perceived_Risk, Brand_Awareness, Ubiquitious_Personalization, Trust, Convenience, Perceived_Control

Table 6.10: Variable-wise statistics on heteroscadesticity

Coefficients[a]						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	.761	.115		6.629	.000
	Brand Awareness	.040	.024	.037	1.704	.088
	Trust	.089	.022	.088	4.002	.000
	Perceived_Risk	-.079	.012	-.094	-6.666	.000
	Convenience	.143	.030	.124	4.746	.000
	Perceived_Control	.171	.030	.154	5.785	.000
	Ubiquitious Personalization	.153	.022	.153	7.107	.000
	Seamless Experience	.303	.025	.278	12.265	.000
a. Dependent Variable: Customer_Perceived_Value						

6.5.3. Multicollinearity Assumption

Multicollinearity arises when there is a strong correlation (higher than 0.85) across variables, indicating that they are measuring the same phenomenon (Kline, 2005). The statistical technique employed to assess multicollinearity is the calculation of the squared multiple correlation (SMC) between each variable. A value over 0.90 for the SMC between any two variables indicates the presence of multicollinearity (Tabachnick et al., 2013). According to Hair et al. (2010), in order to evaluate multicollinearity, two components, tolerance and VIF, are employed to examine the pairwise and multiple variable correlation. Tolerance is a measure of the level of variation in an independent variable that is not accounted for by the other

independent variables (Hair et al., 2010). The measurement is determined by subtracting the squared multiple correlation (SMC) from 1, with a desired value of 0.1. In other words, the remaining independent variables account for 90% of the variance in the measured variable (Hair et al., 2010; Tabachnick et al., 2013). The second metric for assessing multicollinearity is the variance inflation factor (VIF), which quantifies the extent to which standard errors are affected by multicollinearity. The measurement is determined by the reciprocal of the tolerance (1/tolerance). Therefore, if the value is 10, it indicates that the tolerance is 0.1. Based on the criteria for diagnosing multicollinearity, which states that the tolerance value should be less than 0.2 and the VIF should be greater than 5, the findings in Table 6.11 indicate that the highest VIF is 4.092 and the tolerance value is 0.244. Consequently, there is an absence of multicollinearity among the independent variables in the present study.

6.5.4. Autocorrelation

This assumption implies that the error terms are uncorrelated with each other, i.e. one error term does not influence the other error term. In regression analysis using time series data, autocorrelation of the residuals ("error terms") econometrics) is a problem. Autocorrelation violates the ordinary least squares (OLS) assumption that the error terms are uncorrelated. While it does not bias the OLS coefficient estimates, the standard errors tend to be underestimated (and the t-scores overestimated) when the autocorrelations of the errors at low lags are positive.

The traditional test for the presence of first-order autocorrelation is the Durbin–Watson statistic. The Durbin-Watson Statistics is used to check the assumption of regression analysis which states that the error terms should be uncorrelated. While its desirable value is 2, the desirable range is 1.5 to 2.5. the findings in Table 6.12 indicate that the Durbin Watson statistics for this data is 1.841, which is within the

Table 6.11: The multicollinearity test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
2	(Constant)	0.795	0.140		5.667	0.000		
	age	0.000	0.016	0.000	0.018	0.986	0.807	1.239
	education	-0.005	0.020	-0.003	-0.244	0.808	0.897	1.115
	gender	0.018	0.026	0.009	0.697	0.486	0.954	1.048
	income	-0.004	0.012	-0.005	-0.319	0.750	0.868	1.152
	familysize	-0.025	0.023	-0.014	-1.096	0.273	0.995	1.005
	Brand Awareness	0.042	0.024	0.038	1.748	0.081	0.366	2.735
	Trust	0.089	0.022	0.088	4.003	0.000	0.356	2.809
	Perceived Risk	-0.079	0.012	-0.094	-6.488	0.000	0.826	1.210
	Convenience	0.142	0.030	0.123	4.688	0.000	0.250	4.002
	Perceived Control	0.171	0.030	0.154	5.781	0.000	0.244	4.092
	Ubiquitious Personalization	0.153	0.022	0.153	7.088	0.000	0.371	2.693
	Seamless Experience	0.304	0.025	0.278	12.245	0.000	0.335	2.985
a. Dependent Variable: Customer_Perceived_Value								

Table 6.12: The autocorrelation test

Model Summary[c]										
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**					**Durbin-Watson**
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**	
2	.775[b]	0.601	0.598	0.65833	0.567	467.92	7	2307	0	1.841
b. Predictors: (Constant), familysize, education, gender, income, age, Trust, Perceived_Risk, Ubiquitious_Personalization, Brand_Awareness, Seamless_Experience, Convenience, Perceived_Control										
c. Dependent Variable: Customer_Perceived_Value										

required range (1.5 to 2.5) which means that the errors are uncorrelated there is no autocorrelation.

Once the data cleaning stages have been completed and the essential assumptions for using multivariate analysis techniques have been met, the data is now prepared for further analysis. According to Churchill (1979), it is crucial to evaluate the reliability and validity of the data gathered at this point.

6.6. Factor Analysis and Reliability Assessment

6.6.1. Common method bias (CMB)

As discussed in the section 5.5.10.2.1, we shall now proceed with carrying out statistical test to examine presence of common method bias.

As discussed, there are two primary methods for reducing or addressing the issue of CMB: procedural and statistical, as stated by Podsakoff et al. (2012). Podsakoff et al. (2003) state that the most effective approach relies on the specific research topic, the causes of method variance, and the practicality of the available options. Jordan, P. J., & Troth, A. C. (2020) suggests that it is crucial to acknowledge that CMB is a form of bias in research, therefore, implementing methodological and study design solutions before collecting data in practical settings provides a more superior answer in terms of quality.

We have already taken procedural approach to keep CMB at the minimum, by collecting data from the two different sources and at two different times. However, to re-confirm absence of prevalence of CMB, we continued with the testing.

We conducted the test as per Harman's Single-Factor Test by using SPSS v 25.0. In SPSS and as recommended we conducted dimension reduction through

Exploratory Factor Analysis (EFA) for carriying out extraction of data by setting the method to Principal Axis Factoring or Principal Components, process to unrotated factor solution, and defining the number of factor as '1'. The output of the extraction is provided in the below table 6.13.

Table 6.13: Total variance explained for testing common method bias

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.425	43.713	43.713	14.425	43.713	43.713
2	2.391	7.245	50.958			
3	1.508	4.568	55.527			
4	1.113	3.373	58.899			
5	.836	2.534	61.434			
6	.722	2.189	63.623			
7	.672	2.037	65.660			
8	.630	1.910	67.570			
9	.620	1.880	69.450			

The total variance explained by the single factor is 43.7%, which much less than the threshold of 50%. This indicates that CMB is not a major concern with the model.

The results of the KMO and Bartlett's test are presented in Table 6.14, showing that Bartlett's test is statistically significant ($p < 0.05$) and the KMO index above the minimal value of 0.6, indicating that the CMB is absent in the model.

Table 6.14: KMO and Bartlett's Test (CMB)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.975
Bartlett's Test of Sphericity	Approx. Chi-Square	44162.890
	df	528
	Sig.	.000

6.6.2. Exploratory Factor Analysis

Factor analysis (FA) is a statistical method employed to identify variables and propose dimensions (Churchill, 1979; Field, 2005). The process involves identifying the inter-correlation between measurement items and grouping them into sets called factors. These factors are then associated with a concept using theory (Hair et al., 2010). Hair et al. (2010) outline two primary objectives of doing factor analysis. The first step is to choose the unit of analysis. Factor analysis is a comprehensive model that investigates the correlations between variables (R-FA) and respondents (Q-FA). Therefore, it discerns the composition of both the variables and the responses. The second objective of factor analysis is to summarize and reduce data, as well as select variables. Factor analysis achieves this by organizing variables into groups and identifying which variables should be further analyzed, resulting in data reduction. The primary objective of doing exploratory factor analysis (FA) for this study is to summarize and reduce the data.

The exploratory factor analysis is carried out in three sequential phases (Pallant, 2020). The first assessment evaluates the appropriateness of data for factor analysis based on the sample size and the inter-correlations among items. The sample size is determined by the ratio of the number of cases to the number of items, which must be more than 5:1 (Hair et al., 2010). Furthermore, the current study's sample size is considered to match the criteria set by Tabachnick et al. (2013), p.613), who propose that a minimum of 300 cases is desirable for factor analysis. The correlation matrix demonstrates that the inter-correlation among items for the variables in the current research is larger than 0.3. The measure of sampling adequacy (MSA) assesses the degree of inter-correlations among the variables, with a numerical scale ranging from 0 to 1. factors with values equal to or greater than 0.5 are considered to be reliable predictors based on other factors, with no errors. Conversely, variables that have values below 0.5 should be eliminated (Hair et al.,

2010). In the present investigation, all the MSA (mean square adequacy) values for each item exceed 0.5, suggesting a strong positive association among the components. In addition, two statistical tests are employed to evaluate the factorizability of the data: Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sample adequacy (Pallant, 2020, p.183). The Bartlett's test of sphericity, which assesses the significance of the correlation matrix, with a significance level of less than 0.5, confirms the presence of significant correlations among the variables. KMO is the ratio of the sum of squared correlations to the sum of squared correlations and the sum of squared partial correlations. The suitability of FA necessitates a minimum threshold of 0.6 (Tabachnick et al., 2013). The results of the KMO and Bartlett's test are presented in Table 6.15, showing that Bartlett's test is statistically significant ($p < 0.05$) and the KMO index above the minimal value of 0.6, indicating that the data is suitable for factor analysis.

Table 6.15: KMO and Bartlett's Test (CFA)

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.974
Bartlett's Test of Sphericity	Approx. Chi-Square	43582.383
	df	528
	Sig.	.000

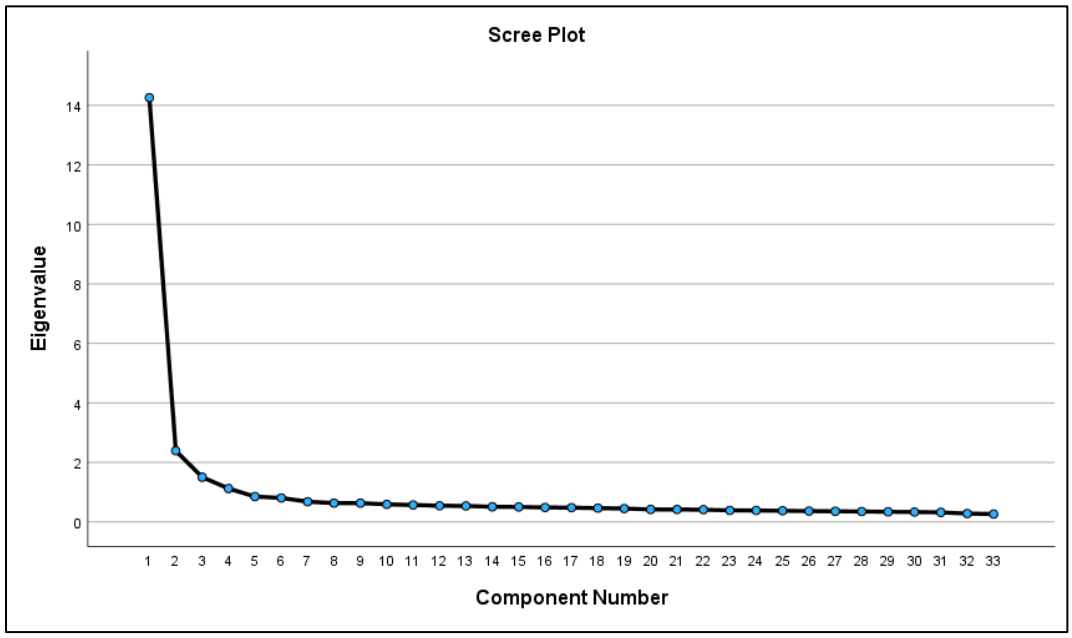
Secondly, to ascertain the factor extraction technique, principal component analysis (PCA) was employed. PCA is widely utilized and widely regarded as the most appropriate strategy for summarizing the data (Field, 2005; Hair et al., 2010). The factors are determined using Kaiser's criteria or eigenvalue. Only factors with an eigenvalue of one or more are kept. The scree test is a graphical method used to determine the number of factors to be extracted by displaying the latent roots against the number of components in their sequence of extraction (Hair et al., 2010, p. 110). Variables that are located above the inflection point on the scree plot should

Table 6.16: Total number of extracted variable and total variance explained using EFA

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings (a)
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	14.258	43.206	43.206	14.26	43.206	43.206	13.497
2	2.391	7.247	50.453	2.391	7.247	50.453	4.539
3	1.505	4.56	55.013	1.505	4.56	55.013	9.329
4	1.121	3.397	58.41	1.121	3.397	58.41	6.699
5	0.853	2.584	60.994				
6	0.805	2.44	63.434				
7	0.679	2.058	65.492				
8	0.632	1.915	67.407				
9	0.631	1.911	69.318				
Extraction Method: Principal Component Analysis.							
a When components are correlated, sums of squared loadings cannot be added to obtain a total variance.							

be considered for further inquiry. Hair et al. (2010) propose that the factors incorporated should account for a minimum of 60% of the variation. In the present investigation, a total of four components are retrieved with an eigenvalue greater than one, collectively accounting for 58.41% of the total variance. This information is presented in Table 6.13.

Figure 6.3: Scree plot of the factors



The scree test validates the preservation of an equal number of components. The scree plot of variables may be observed in Figure 6.3. Although several strategies are employed to determine the appropriate amount of elements to maintain, ultimately, it relies primarily on the researcher's opinion (Pallant, 2020).

The third stage involves factor rotation, which is typically determined following the factor extraction approach (Tabachnick et al., 2013). The study used the oblique method for rotation, which is the most often utilized approach for data reduction

(Hair *et al.*, 2010; Tabachnick et al., 2013). Various methods can be employed to implement rotation, including orthogonal or oblique techniques. However, the current study utilizes SPSS v.25 for data analysis, which encompasses multiple rotation approaches such as QUARTIMAX, VARIMAX, EQUAMAX, DIRECT OBLIMIN, and PROMAX. The direct oblimin oblique technique is a validated analytical method for achieving an oblique rotation of components (Hair *et al.*, 2010). Factor loadings with an absolute value greater than ±0.40 are considered acceptable, taking into account the size of the sample. The communality of each variable should surpass 0.5 in order to account for a significant amount of variance in the component. Any variable with a communality value below 0.5 should be excluded from consideration, as it does not provide sufficient explanation (Hair *et al.*, 2010). According to Field (2005) variables that meet the criteria for becoming candidates are those factors that have a factor loading or communality below 0.4 and 0.5 respectively, and also have cross-loading values that surpass 0.4 on more than one factor. Table 6.17 shows various variables with their composite reliability, AVE and Cronbach's alpha scores. Supporting convergent validity, all CR values were about the 0.7 threshold. The average variance extracted (AVE) for each of the four constructs indicates acceptable convergent validity (higher than 0.50) (Fornell, C., & Larcker, 1981), which was obtained after removed items of seamlexp2 (0.410) and conv1 (0.459) from factor1, and trust3 (0.325) from factor2 as the measures of sampling adequacy were not above the acceptable level of 0.5 (Coakes and Steed, 2003). Also, these four factors were extracted with good discriminant validity as AVE of each variable is greater than its correlation coefficient with other variables. This means that the number factors extracted is less than the number of variables in the proposed framework, which results in the merger of the constructs. Factors1 comprise of the three constructs of convenience, control, and ubiquitous personalization. Similarly, Factor2 comprise of awareness and trust. Factor3 and

factor4 are a pure construct of seamless experience, and risk, respectively. Cronbach's alpha values for each factors ranged from 0.824 to 0.952.

Table 6.17: The rotated component matrix, with CR, AVE, and Cronbach's alpha value

Scale item	Factor loading	CR	AVE	Cronbach's alpha
Factor1				
contl7	0.843	0.945	0.702	0.949
contl6	0.805			
contl8	0.797			
contl5	0.791			
ubqtprsan1	0.766			
contl3	0.746			
conv3	0.706			
conv7	0.704			
seamlexp1	0.703			
contl2	0.691			
contl1	0.688			
contl4	0.679			
ubqtprsan2	0.666			
conv6	0.655			
conv2	0.635			
conv5	0.595			
conv4	0.575			
conv1	0.504			
Factor2				
brawerns1	0.768	0.861	0.686	0.869
brawerns2	0.733			
brawerns4	0.697			
brawerns5	0.690			
brawerns6	0.677			
brawerns3	0.661			
trust1	0.560			
Factor3				
seamlexp5	0.768	0.755	0.668	0.827
seamlexp4	0.732			
seamlexp6	0.701			

seamlexp3	0.409			
Factor4				
risk3	0.851	0.901	0.834	0.856
risk2	0.835			
risk1	0.833			
risk4	0.816			
Note(s): N = 2320 customers in 43 brands				

Factor1 is labelled as "Customer Empowerment" (CEmp) as it encompasses the concept of control, personalization, and convenience. There is a large body of literature that strongly justifies constructs of control and personalization as being an integral part of empowerment and mildly justifies convenience as a virtue of customer empowerment and hence we added "enhanced" to the construct to bring in convenience of effort, time, and flexibility as one of the mechanism that drives customer empowerment.

Alshibly & Chiong, 2015 advocates that organizations must consider customers' perceptions of empowerment as a key causal mechanism in deriving value from it as it leads towards their loyalty and relates it to control, convenience of choice, and personalization. Theories of power underpin conceptualizations of empowerment: ''to empower means to give power'' (Thomas & Velthouse, 1990). Consumer empowerment has been defined (Wathieu et al., 2002) as letting consumers take control of variables that are conventionally pre-determined by marketers. Customer behavior literature comprise of themes that are a part of or closely related to the concept of power; perceived control, and convenience of choice (e.g., (Botti & Iyengar, 2006; Broniarczyk & Griffin, 2014). Taking a psychological viewpoint, there is a body of literature that has linked power or empowerment to control through various definitions (Fatout, 1995; Rappaport, 1987; Schiffman & Kanuk, 2009).

Factor2 is labelled as awareness as it has only one item from trust and rest from awareness. Though it could have been labelled as “Customer-based Brand Equity” for the fact that its dimensions decomposes into brand awareness (D. A. Aaker, 1996) and trust (Atilgan et al., 2009; Kevin Lane Keller, 2003) and it leads to customer perceived value formed by the combination of product’s functional performance, emotional benefits, and customer’s lifestyle (Ming et al., 2011). Ming et al., 2011, further, demonstrated this using three-level hierarchical chain framework developed in a fast food brand industry. Atilgan et al., 2009 through his study of a customer-based brand equity for a global brand, adds trust as a vital component of brand equity & by positing it as a rather more advanced construct, argues that brand awareness has partially converged with the brand associations dimension (B. Yoo et al., 2000; B. Yoo & Donthu, 2001) in the global context for brand equity.

Nevertheless, we maintain and labelled as awareness and is made up of all the original items of awareness with addition of one item from the original variable of trust. Scores of these factors, that is, enhanced customer empowerment and awareness are used for subsequent analyses.

6.6.3. Reliability Assessment (Cronbach’s alpha)

Reliability pertains to the extent to which the measurement items of a variable remain consistent and error-free throughout time (Kline, 2005). Reliability may be measured in three ways: test-retest, which measures consistency at two separate locations; split-half, which halves the questionnaire and examines consistency; or Cronbach's alpha, which assesses the overall consistency of the questionnaire. Utilizing the split-half technique is a straightforward process, but the outcomes are contingent upon the specific approach utilized to divide the data (Field, 2005). Consequently, Cronbach's alpha is the most often employed metric for evaluating

dependability. This measure assesses internal consistency by applying consistency to all variables (Hair et al., 2010). At this step, it is beneficial to assess the dependability of the recently gathered data from the primary survey sample by utilizing the refined sample items. By removing the possibility that the findings of the pilot test are random and minimizing errors caused by sampling items and external variables, such as personal characteristics, content valid measures may be developed (Churchill, 1979). Prior to evaluating the validity, it is necessary to first examine the reliability of the scale (Churchill, 1979; Hair et al., 2010).

Table 6.18 displays the outcomes of the reliability test conducted on the scale utilized in the primary survey. The author demonstrate that all constructs have strong and dependable measurements, as indicated by inter-item correlation and item-to-total correlation values beyond the thresholds of 0.3 and 0.5, respectively (Hair et al., 2010), except the case or risk for item-to-total correlation value.However, the risk is the only variable that is hypothesized for negative correlation. In addition, the Cronbach's alpha values for the constructs vary from 0.95 to 0.965. This indicates that they fall within the acceptable range, with the strength of the constructs ranging from good to exceptional (Hair et al., 2003). Next, the data shall be tested for inter-class correlation so that its structure can be assessed and decision on multi-level modeling can be taken.

Table 6.18: Reliability test (Cronbach's alpha) of the main study

Construct	Scale item	Mean	Std. Deviation	Minimum inter-item Correlation	Corrected item-Total Correlation	Cronbach's Alpha if item deleted
Factor1: Customer empowerment	contl7	5.54	1.147	0.482	0.696	0.96
	contl6	5.49	1.152	0.517	0.7	0.96
	contl8	5.5	1.178	0.463	0.677	0.96

α = 0.949	contl5	5.5	1.151	0.514	0.703	0.96
	ubqtprsan 1	5.55	1.134	0.573	0.696	0.96
	contl3	5.53	1.166	0.521	0.683	0.96
	conv3	5.46	1.195	0.425	0.704	0.96
	conv7	5.51	1.161	0.448	0.675	0.96
	seamlexp1	5.51	1.151	0.407	0.693	0.96
	contl2	5.38	1.254	0.463	0.642	0.96
	contl1	5.54	1.135	0.502	0.677	0.96
	contl4	5.52	1.182	0.501	0.68	0.96
	ubqtprsan 2	5.45	1.205	0.573	0.677	0.96
	conv6	5.58	1.152	0.425	0.655	0.96
	conv2	5.47	1.19	0.681	0.681	0.96
	conv5	5.59	1.155	0.425	0.669	0.96
	conv4	5.4	1.234	0.600	0.600	0.96
	conv1	5.42	1.243	0.425	0.630	0.96
Factor2: Awareness α = 0.869	brawerns1	5.56	1.281	0.425	0.587	0.961
	brawerns2	5.53	1.241	0.448	0.654	0.96
	brawerns4	5.64	1.172	0.508	0.625	0.96
	brawerns5	5.69	1.206	0.425	0.551	0.961
	brawerns6	5.66	1.188	0.468	0.59	0.961
	brawerns3	5.51	1.228	0.467	0.657	0.96
	trust1	5.56	1.218	0.525	0.665	0.96
Factor3: Seamless experience - SE α = 0.827	seamlexp5	5.42	1.315	0.45	0.642	0.96
	seamlexp4	5.48	1.226	0.443	0.642	0.96
	seamlexp6	5.32	1.363	0.407	0.602	0.96
	seamlexp3	5.57	1.161	0.447	0.7	0.96
Factor4: Risk - α = 0.856	risk3	2.78	1.456	0.525	-0.242	0.965
	risk2	2.72	1.41	0.53	-0.256	0.965
	risk1	2.87	1.492	0.563	-0.246	0.965
	risk4	2.94	1.534	0.525	-0.247	0.965
Brand preference - BP α = 0.874	brprcptn1	5.49	1.24	0.587	0.701	0.96
	brprcptn2	5.44	1.257	0.588	0.707	0.96
	brprcptn3	5.45	1.247	0.619	0.696	0.96
	brprcptn4	5.42	1.272	0.587	0.706	0.96

6.6.4. Intra-class correlations

To test for variance along groups, we carried out intra-class correlation test (ICC) (Duncan et al., 1997) and design effects calculations (DEFF) (Kish, 1995). Inspection of the multilevel structure of the data showed that the intra class correlations (ICCs) (Table 6.19) were highest for customer empowerment (0.063), seamless experience (0.076), and risk (0.047), indicating more differences between classes at mean levels for these variables than for the other variables. The ICC score revealed that 7.6% of the variations in consumer impressions could be ascribed to the disparity between brands. The Table 6.19 also shows DEFF score for each construct and the minimum value is 1.7 and that for customer-based brand equity. As these results are significantly differed from zero ($p < 0.001$) (B. Swoboda et al., 2016), we proceed with the MLM.

6.7. Ordinary multiple regression analysis and Multilevel modeling:

Multilevel analysis techniques have been developed for the linear regression model (Bryk & Raudenbush, 1992; Goldstein, 2011), and specialized software is now widely available (Raudenbush et al., 2000).

The assumptions of the multilevel regression model are analogous to the assumptions of conventional multiple regression analysis, which include linear relationships, homoscedasticity, and normal distribution of the residuals. According to Maas and Hox (2004), in ordinary multiple regression, it is understood that modest breaches of these assumptions do not result in significantly erroneous parameter estimates or standard errors. Therefore, as long as the sample size is sufficiently large, conventional multiple regression analysis may be considered a reliable method of analysis (Tabachnick & Fidell, 1996). The advantage of multilevel regression analysis is that it allows for direct modeling of heteroscedasticity (Goldsten, 2011).

According to Maas and Hox (2004), their research on the violation of assumptions in ordinary multiple regression suggests that using multilevel methods to analyze multilevel data with non-normally distributed residual errors at the group level only poses problems when one is concerned with the significance or confidence intervals of the variance terms at the second level. Under those circumstances, employing robust standard errors yields more precise results. When the residuals exhibit a symmetric distribution that is not normal, the use of robust standard errors results in confidence intervals that approximate their intended level only when there is a high number of groups. Given that there are 43 participants in study and 40 participants in study, the presence of a non-normal distribution should not pose any issues.

The result of the ICC test suggests clustering of consumer data within brand. Also, the data is non-normal, and heteroscadestic in nature, we intent to use multi-level modeling through Mplus 7.11. As discussed the non-achievement of certain multivariate assumptions of normality and homoscadesticity doesn't become the impediment to move ahead with our analysis. Further facts on Mplus software and multilevel modeling are enlisted below:

Mplus provides a flexible platform for analyzing data with various distributions and can handle non-normal data using robust estimation methods, with some key points to consider when conducting MLM analysis in Mplus with non-normal data:

- Choose Robust Estimation Methods: Mplus offers robust estimation methods that are less sensitive to violations of distributional assumptions, such as Maximum Likelihood Robust (MLR) or Weighted Least Squares (WLSMV). These methods provide robust parameter estimates and standard errors, even when the data are non-normal.

Table 6.19: Inter-class correlation and design effects calculation

Measure	rWG(J).uniform		rWG(J).measure-specific				F ratio	p-value	ICC (1)	ICC (2)	DEFF	Items included
	Mean	SD	Shape	S^2E	Mean	SD						
Customer Empowerment	0.970	0.020	Moderate skew	2.140	0.718	0.374	8.075	0.000	0.063	0.876	4.330	contl1-8, ubqtprsan1-2, conv1-7, seamlexp1
Awareness	0.914	0.076	Moderate skew	2.140	0.579	0.425	2.541	0.000	0.014	0.606	1.763	brawerns1-6, trust1-2
SE	0.848	0.107	Moderate skew	2.140	0.499	0.405	9.696	0.000	0.076	0.897	5.034	seamlexp3-6
Risk	0.620	0.325	Moderate skew	2.140	0.365	0.360	7.117	0.000	0.047	0.859	3.465	risk1-4

- Evaluate Model Fit: It's important to assess the overall fit of your MLM model using fit indices appropriate for the chosen estimation method. Mplus provides various fit indices, including Chi-square test of model fit, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA), among others.

In summary, Mplus offers robust capabilities for conducting MLM analysis with non-normal data. By choosing robust estimation methods, and evaluating model fit, one can obtain valid and reliable results from MLM analysis even when the data are not normally distributed.

6.8. Structural Equation Modelling

As refered in the chapter four of this thesis, structural equation modeling, a multivariate analytic tool, is deployed to elucidate the connections among specified variables in the theoretical model. Various methods can be used to determine estimates for each independent variable, including ordinary least squares (OLS), generalized least squares (GLS), and maximum likelihood estimation (MLE). Initially, the ordinary least squares (OLS) method was commonly employed in early attempts to utilize structural equation modeling (SEM). However, it was later superseded by the maximum likelihood estimation (MLE) methodology. Additional estimate approaches, such as Generalized Least Squares (GLS) and Weighted Least Squares, are already accessible. Nevertheless, the maximum likelihood estimation (MLE) has become the standard method for structural equation modeling (SEM) because of its adaptability and resilience when faced with deviations from the assumption of normalcy. (Hair et al., 2010). All the assumptions about the application of multivariate methods were tested during the initial stage of data analysis. All of these assumptions were valid, with the exception of the assumption of multivariate normality. The estimate approach utilized in this

work is the Maximum Likelihood estimate (MLE) due to the violation of the normality assumption. This technique provides the best fit to the data, even when the assumption of multivariate normality is not met (Tabachnick et al., 2013). AMOS (Analysis of Moment Structures) v.20 is a statistical software tool that is known for its ability to generate clear output, estimate missing data, and analyze data with many groups (Tabachnick et al., 2013).

Multilevel modeling (MLM) was employed to examine the hypotheses. The data set consists of a predictor variable (cross channel integration) scored by industry experts, and dependent variables rated by customers of the brand. The MLM approach is used to account for the nested structure within the data. This feature enables the inclusion of diverse regression slopes, thus addressing the issue of uniform regression slopes observed in conventional structural equation modeling (SEM). MLM, or Multilevel Modeling, takes into account variations between different brands and enables the analysis of data at both the consumer and brand levels simultaneously. Additionally, MLM also calculates the interconnections between these levels. By taking into account the inherent bias in standard errors caused by the presence of independent observations in the data, this approach allows for a more precise estimation of standard errors, significance levels, and confidence intervals compared to the traditional standard error of the mean (SEM). The nested structure of the data must be taken into account, as ignoring it would result in a misrepresentation of the model and introduce bias in the standard error (Hox, 2010). Thus, hypotheses can be tested by analyzing the direct effects on both the customer (level 1) and brand level (level 2).

The procedure is identical to that of a conventional structural equation modeling, which encompasses two unique models: the measurement model, which is subsequently converted into the structural model. The measuring model establishes

the indicators for each concept and assesses the construct's validity through confirmatory factor analysis (CFA). The structural model is a graphical depiction of the relationships between variables in various domains. It is employed to investigate and evaluate hypotheses (Hair et al., 2010).

6.8.1. Measurement model

The measurement model's validity relies on evaluating both its goodness of fit and its validity evaluation. Therefore, the investigation of the measuring model's validity was conducted in two stages: first, by analyzing the goodness of fit, and second, by evaluating its validity.

6.8.1.1. Fit indices and validity of measures

Items on all the seven constructs (awareness, trust, risk, convenience, control, ubiquitous personalization, and seamless experience) of CPV were analyzed with series of confirmatory factor analyses in IBM SPSS AMOS v20.0.0 to confirm the model fit of the data to the latent structure proposed (LeBourgeois et al., 2005) and to examine the discriminant validity of the measures. As shown in Table 6.20, the four-factor structure fitted the data well (CPV: F=four-factor model, $\chi 2 = 6966.04$, df = 1433, $\chi 2/df = 4.86$, $p < 0.001$, root mean square error of approximation (RMSEA) = 0.0408, comparative fit index (CFI) = 0.925, Tucker Lewis index (TLI) = 0.9194), which is better than other parsimonious models.

Table 6.20: The results of confirmatory factor analyses (CFAs)

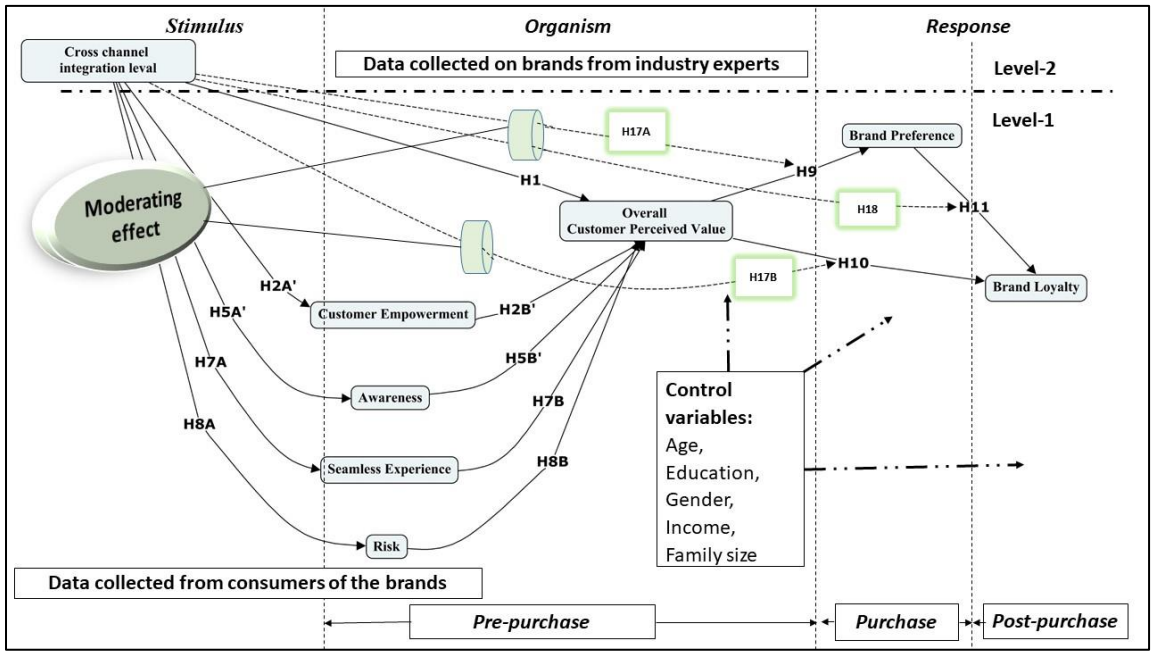
Model	$\chi 2$	d.f.	CMIN/DF	CFI	TFI	RMSEA	SRMR
Base model (four-factor model)	6966.04	1433	4.861	0.925	0.919	0.041	0.033
Three-factor model	10117.01	1440	7.026	0.882	0.874	0.051	0.143

(combining factor1 & 2)							
Three-factor model (combining factor1 & 3)	7800.35	1440	5.417	0.914	0.908	0.044	0.037
Three-factor model (combining factor1 & 4)	10426.35	1440	7.241	0.878	0.870	0.052	0.045
Three-factor model (combining factor2 & 3)	8498.43	1440	5.902	0.904	0.898	0.046	0.040
Three-factor model (combining factor2 & 4)	10618.64	1440	7.374	0.876	0.867	0.052	0.047
Three-factor model (combining factor3 & 4)	10293.14	1440	7.148	0.880	0.872	0.051	0.045
Two-factor model (combining factor1, 2 & 3)	9280.999	1447	6.414	0.894	0.887	0.048	0.070
Two-factor model (combining factor1, 2 & 4)	13352.57	1447	9.228	0.839	0.828	0.060	0.134
Two-factor model (combining factor2, 3 & 4)	14306.16	1447	9.887	0.83	0.81	0.062	0.199
Two-factor model (combining	12902.33	1447	8.917	0.85	0.84	0.058	0.179

factor3, 4 & 1)							
One-factor model (combining all factors in one)	12502.38	1454	8.599	0.85	0.84	0.057	0.050
Note(s): N = 2120 customers in 43 brand groups, CFI = comparative fit index; TLI = Tucker–Lewis index; SRMR = standardized root mean square residual; RMSEA = root mean square error approximation							

Based on the CFA, and fit indices, and validity of measure, we arrive at the revised conceptual model, which is shown in figure 6.4.

6.4: Revised conceptual model



6.8.2. Structural model

6.8.2.1. Endogeneity tests

ICC and DEEF test suggested that our data structure is such that the consumer data is nested within brands. Although we have incorporated various control variables like age, education, gender, family size and income in this study, there could be other omitted variables that may cause endogeneity and influence the results of this study. Further, prior research on multichannel strategies (e.g., Jindal et al., 2007) indicates that certain firm factors affect the level of multichannel usage and hence focal factors of perceived value and overall CPV, which may cause endogeneity. Furthermore, factors of OMC dimensions, purchase-journey phase, product-category, consumer type, and focal brand-type also impacts our key dependent variables of perceived value. We, therefore, tested the endogeneity of the explanatory variables using multilevel generalized method of moment's (GMM) technique (Kim and Frees, 2007) that enable us to address endogeneity in multilevel models. This method is effective when no well-recognized external instrumental variables are available. We used the REndo package in R (Gui et al., 2023) wherein multilevelIV() function was implemented for identification due to the different levels of the data. The endogenous regressors can be present at different levels and the function comes along with a built in omitted variable test, which helps in deciding which model is robust to omitted variables at different levels. These tests were conducted for the key dyadic relationships in the models (5 numbers) that comprise of a cross channel integration level of brands (CCI) regressor and various regress and of CPV, CEmp, Awareness, SE, and Risk & the results are produced below in Table 6.21.

Table 6.21: Testing result with multilevel IV() function

Independent variable	Dependent variable	p-value (REF vs FE_L2)	Endogeneity test
Cross-channel integration level	Overall CPV	0.749	Ho can't be rejected
Cross-channel integration level	factor1	0.617	Ho can't be rejected
Cross-channel integration level	factor2	0.964	Ho can't be rejected
Cross-channel integration level	factor3	0.697	Ho can't be rejected
Cross-channel integration level	factor4	0.349	Ho can't be rejected

As shown in the table 6.21, the null hypothesis that states, "No omitted level-two effects" (correlation between a level-2 variable and the level-1 error) is not rejected ($p > 0.05$). It indicate absence of the omitted variables in the basic model.

6.8.2.2. Descriptive statistics, bivariate correlations and discriminant validity

Table 6.22 presents correlations, means and standard deviations of the study variables. Results also indicate that all the square roots of the AVE (diagonal elements in Table 6.22) are larger than the correlations, suggesting the discriminant validity of our measures.

Table 6.22: Correlations and descriptive statistics

Variables		Mean	SD	1	2	3	4	5	6	7	8
Individual level											
1	factor1	5.501	0.860	(0.720)							
2	factor2	5.580	0.912	0.700**	(0.710)						
3	factor3	5.446	1.029	0.691**	0.621**	(0.860)					
4	factor4	2.826	1.233	-0.362**	-0.294**	-0.297**	(0.836)				
5	BP	5.449	1.069	0.744**	0.652**	0.753**	-0.325**				
6	BL	5.512	1.054	0.732**	0.678**	0.714**	-0.310**	0.838**			
7	CPV	5.487	1.039	0.749**	0.633**	0.655**	-0.364**	0.680**	0.700**		
Brand level											
8	CCI	2.435	0.686	0.026	0.032	0.018	-0.010	-0.014	0.007	0.012	

Note(s): N 2320 customers of 43 brand groups. Values in (parentheses) are the square root of the variance shared between the constructs and their measures. Off diagonal elements are the correlations among constructs
*p < 0.05, **p < 0.001 (2-tailed)

6.8.2.3. Effect of control variables

Table 6.23 provides correlations of the five control variables with various study variables. The results shows significant positive effect between Age and CEmp, Awareness & SE; education and CEmp, SE & risk; family size and brand preference.

Table 6.23: correlation of control variables with key construct variables

Control variable	factor1	factor2	factor3	factor4	CPV	BP	BL
Age	0.166***	0.12***	0.188***	-0.282*	-0.014	0.045*	-0.039
Education	-0.11***	0.014	-0.152***	0.274***	0.009	-0.026	0.048**
Gender	-0.096**	-0.118**	-0.079**	0.096**	0.024	0.017	0.008
Family size	0.037	-0.002	0.028	0.01	-0.027	0.095***	-0.005
Income	-0.005	0.036	0.013	0.038*	-0.01	-0.003	0.013

Note(s):
N 2320 customers of 43brand groups. CPV = customer perceived value, CCI = cross channel integration. factor1 = enhanced customer empowernment, factor2 = customer-based brand equity, factor3 = seamless experience, factor4 = risk
*p < 0.1, **p < 0.05 (2-tailed), ***p < 0.001 (2-tailed)

6.8.2.4. Hypotheses testing

We employed Mplus 7.11 (Muthén and Muthén, 2010) to conduct multilevel path analysis. We developed a 2-2-1-1 mediation multilevel structural equation modelings (Preacher et al., 2010, 2011). We also followed (Preacher et al., 2010)in using the Monte Carlo approach of 20,000 resamplings and constructing 95% confidence intervals (CIs) to enhance the statistical strength in testing the indirect effects in multilevel model analyses (Kong et al., 2017). We also developed a cross-level moderation modeling (Heck and Thomas, 2015) to test the cross level relationships. Furthermore, according to Singer (1998), we group-mean centered

the individual-level independent variables and grand-mean centered the group-level independent variables.

After the investigation of descriptive statistics and bivariate correlations in IBM SPSS AMOS v20.0.0, multilevel regression analyses were calculated in Mplus 7.11 with level-one consumer construct of CPV (three subscale), brand preference (four subscale), brand loyalty (five subscale), as dependent variables. CEmp, Awareness, SE, & Risk are mediator variables mediating the relationship between CCI and CPV. Moreover, because consumers were nested in brands, brand category was introduced as a cluster variable. CCI stage is used as a predictors at a brand (second) or class level.

Within our framework, we implemented a 2-1-1-1-1 MLM (split into two sections: 2-1-1 and 1-1-1), with the number 2 denoting higher-level impacts and the number 1 representing lower-level effects.

The 2-1-1 framework involves analyzing the levels of the X variable (cross channel integration of brand), the M variable (mediator factors of CPV), and the Y variable (outcomes - CPV). These variables determine the within- and between-effects that can be measured and interpreted, as explained by Zhang et al. (2010). The link between the X and M variables follows the conventional mediation path in the framework, where X is at level 2 and M is at level 1 (Baron & Kenny, 1986; Zhang et al., 2008). This relationship is assessed and interpreted as a between-group effect. In addition, the b path that exists between M and Y in our model operates at the level of individual customers, namely within the 1-1 component of the 2-1-1 model.

The outcome variable (CPV) in 2-1-1 framework becomes X variable in 1-1-1 framework. Hence, in the 1-1-1 framework, the levels of each of the X (CPV) and

M (mediator, brand preference), and Y variables (outcomes – brand loyalty) dictate the within-effects that occur within groups of customers separated by brand.

Five of the seven original seven variables have been merged to form two variables of Customer empowerment & Awareness. Hypotheses that discusses relationship involving these original variables has not been tested but results has been shown as per the new variables and appropriate numbers given thereof. For example, H2, H3, H4 refers to convenience, control, and ubiquitous personalization, respectively then the test results shall be named H2' that refers to the corresponding merged variable of CEmp. Similarly, if H20A, H20B, H20C is referred to H20A' and H20D & H20E is referred to as H20D' for CEmp & Awareness, respectively. The list of only revised hypotheses after CFA against the initial hypotheses is enlisted in the table 6.24. They hypothesis that has not been revised has not been mentioned in this table.

Table 6.24: Revised hypotheses after CFA against the original hypotheses

Original Number	Original hypothesis statement	New Number	New hypothesis statement
H2A	Cross channel Integration service in an entire customers' purchase journey has positive effect on convenience	H2A'	Cross channel Integration service in an entire customers' purchase journey has positive effect on customer empowerment
H3A	Cross channel Integration service in an entire customers' purchase journey has positive effective on control		
H4A	Cross channel Integration service in an entire customers' purchase journey has positive effective on ubiquitous personalization		
H5A	Cross channel Integration service in an entire customers' purchase	H5A'	Cross channel Integration service in an entire customers' purchase

	journey has positive effective on awareness		journey has positive effective on awareness
H6A	Cross channel Integration service in an entire customers' purchase journey has positive effective on trust		
H2B	Convenience has positive effective on CPV in a Cross channel integrated environment	H2B'	Customer empowerment has positive effective on CPV in a Cross channel integrated environment
H3B	Conrol has positive effective on CPV in a Cross channel integrated environment		
H4B	Ubiquitous personalization has positive effective on CPV in a cross channel integrated environment		
H5B	Awareness has positive effective on CPV in a Cross channel integrated environment	H5B'	Awareness has positive effective on CPV in a Cross channel integrated environment
H6B	Trust has positive effective on CPV in a cross channel integrated environment		
H12A-G	7 factors of CPV mediates the relationship between cross channel integration and overall customer perceived value	H12A', H12D', H12F, H12G	4 factors (Customer empowerment, awareness, seamless experience, risk) of CPV mediates the relationship between cross channel integration and overall customer perceived value
H14A-G	CPV mediated the relationship between 7 factors of CPV and brand preference	H14A', H14D', H14F, H14G	CPV mediated the relationship between 4 factors (Customer empowerment, awareness, seamless experience, risk) of CPV and brand preference
H15A-G	CPV mediated the relationship between 7 factors of CPV and brand loyalty	H15A', H15D', H15F, H15G	CPV mediated the relationship between 4 factors (Customer empowerment, awareness, seamless experience, risk) of CPV and brand loyalty

H19A-G	Cross channel integration moderates the indirect effect of factors of CPV on brand preference via CPV	H19A', H19D', H19F, H19G	Cross channel integration moderates the indirect effect of 4 factors (Customer empowerment, awareness, seamless experience, risk) of CPV on brand preference via CPV
H20A-G	Cross channel integration moderates the indirect effect of factors of CPV on brand loyalty via CPV	H20A', H20D', H20F, H20G	Cross channel integration moderates the indirect effect of 4 factors (Customer empowerment, awareness, seamless experience, risk) of CPV on brand loyalty via CPV

We measured and interpreted both the direct effects and indirect effect and between-effects and within-effects. Table 6.25 gives the results for each hypothesis. Next, we discusses moderating effect of cross channel integration on various relationships in the model, shown in Table 6.26. Further, we measured and interpreted mediated moderation effects, results of which has been shown in the Table 6.27.

6.8.2.5. Test of direct effects

The study found that cross channel integration had a positive and significant influence on customer perceived value ($\beta = 0.021$, $p < 0.05$), therefore validating Hypothesis l. The study revealed strong and statistically significant correlations between cross channel integration and two specific factors: CEmp ($\beta = 0.02$, $p < 0.05$) and Awareness ($\beta = 0.019$, $p < 0.05$), providing support for H2A' and H5A', respectively. A positive and statistically significant correlation was observed between cross channel integration and the pure extracted factor, SE ($\beta=0.019$, $p = 0.05$), providing support for hypothesis H7A. The study indicated that the connection between cross channel integration and risk, as a pure extracted factor, was negative but not statistically significant ($\beta = -0.013$, p = ns). This result does not support hypothesis H8A.

Further, positive and statistically significant correlations were found between muddled factors and CPV; CEmp (within-effect: $\beta = 0.858$, $p < 0.001$, between-effect: $\beta = 1.093$, $p < 0.001$), and Awareness (within-effect: $\beta = 0.673$, $p < 0.001$, between-effect: $\beta = 1.102$, $p < 0.001$), supporting H2B' and H5B'. Positive and significant relationship was found between pure factor, SE (within-effect: $\beta = 0.606$, $p < 0.05$, between-effect: $\beta = 0.814$, $p < 0.001$), supporting H7B. Negative and significant relationship was found between risk and CPV (within-effect: $\beta = -0.212$, $p < 0.001$, between-effect: $\beta = -0.593$, $p < 0.001$), supporting H8B.

We have not tested H2A & B, H3A & B, H4A & B, H5A & B, and H6A & B as related individual variables were not extracted in the CFA.

Also, in support of H9 and H10, the relationship of CPV with BP ($\beta=0.638$, $p < 0.001$) and BL ($\beta=0.246$, $p < 0.001$), respectively were found to be statistically significant. Further, the correlation between BP and BL ($\beta=0.665$, $p< 0.001$) was found positive and statistically significant, supporting H11.

6.8.2.6. Testing mediation (indirect effects)

There are four indirect path from cross channel integration to customer perceived value through CEmp, Awareness, SE, and risk in the model.

The direct effects from CCI to the three factors of CEmp, Awareness, & SE and that from these three factors to CPV are all significant. Also, as indirect effect of the factors; CEmp ($\beta=0.022$, $p< 0.05$), Awareness ($\beta=0.021$, $p< 0.05$), and SE ($\beta=0.016$, $p= 0.05$) are significant, the three hypotheses of H12A', H12D', & H12F, which states that these factors 2-1-1 mediates the CCI-CPV link, is supported as respective β-value changes in indirect effect as compared to the direct effect.

For risk, as neither direct effect from CCI to it, nor indirect effect (β=0.0088, p< ns) from CCI to CPV through it is significant, the hypothesis H12G is not supported.

Further, CPV 2-1-1 mediates the correlation of CCI with BP as the direct effect from CCI to CPV (β=0.021, p< 0.05), CPV to BP (β=0.638, p< 0.001) are significant and indirect effect from CCI to BP (β=0.013, p=0.05) is also statistically significant and the direct effect from CCI to BP (β=0.007, p=ns) is insignificant, supporting H13A.

Similarly, CPV 2-1-1 mediates the correlation of CCI with BL as the direct effect from CCI to CPV (β=0.021, p< 0.05), CPV to BL (β=0.681, p< 0.001) are statistically significant and indirect effect from CCI to BL (β=0.014, p=0.05) is also significant and the direct effect from CCI to BL (β=0.004, p=ns) is insignificant, supporting H13B.

Also, CPV 1-1-1 mediates the correlation of factors of CPV with BP as the direct effect from these factors to CPV [(CEmp (β= 0.858, p < 0.001), awareness (β= 0.673, p < 0.001), SE (β= 0.606, p < 0.001)] are statistically significant, direct effect from CPV to BP (β= 0.638, p < 0.001) is significant, and direct effect [(CEmp (β= 0.630, p < 0.001), awareness (β= 0.426, p < 0.001), SE (β= 0.535, p < 0.001)] and indirect effect from these factors to BP [(CEmp (β = 0.238, p < 0.001), awareness (β = 0.275, p < 0.001), SE (β = 0.207, p < 0.001)] are both significant with change in the respective β-values [(CEmp (0.630 to 0.238), Awareness (0.426 to 0.275), SE (0.535 to 0.207)], supporting H14A', H14D', H14F. Further, CPV 1-1-1 mediates the relationship between risk and BP as the direct effect of risk on CPV (β = -0.212, p < 0.001) is negative and significant, direct effect of CPV on BP (β= 0.638, p < 0.001) is significant, and the indirect effect of the risk on BP (β = -0.143,

$p < 0.001$) is statistically significant but its direct effect is insignificant ($\beta = -0.048$, p = ns), supporting H14G.

Furthermore, CPV 1-1-1 mediates the correlation of factors with BL as the direct effect from these factors to CPV [(CEmp ($\beta = 0.858$, $p < 0.001$), Awareness ($\beta = 0.673$, $p < 0.001$), SE ($\beta = 0.606$, $p < 0.001$)] are significant, direct effect from CPV to BL ($\beta = 0.246$, $p < 0.001$) is significant, and direct effect of these factors to BL [(CEmp ($\beta = 0.570$, $p < 0.001$), Awareness ($\beta = 0.447$, $p < 0.001$), SE ($\beta = 0.449$, $p < 0.001$)] and indirect effect from these factors to BL [(CEmp ($\beta = 0.297$, $p < 0.001$), awareness ($\beta = 0.288$, $p < 0.001$), SE($\beta = 0.259$, $p < 0.001$)] are both significant and the respective β-values changes from direct to indirect effects [(CEmp (0.570 to 0.297), Aw (0.447 to 0.288), SE (0.449 to 0.259)], supporting H15A', H15D', H15F. Further, CPV 1-1-1 mediates the relationship between risk and BP as the direct effect of the risk on CPV ($\beta = -0.212$, $p < 0.05$) is negative and significant, direct effect of CPV on BL ($\beta = 0.246$, $p < 0.001$) is significant, and indirect effect of the risk on BL ($\beta = -0.151$, $p < 0.001$) is significant but its direct effect is insignificant ($\beta = -0.041$, p = ns), supporting H15G.

Further, brand preference 1-1-1 mediates the relationship between CPV and BL as the direct effect from CPV to BP ($\beta=0.638$, $p< 0.001$), BP to BL ($\beta=0.665$, $p< 0.001$ are significant, direct effect of CPV on BL ($\beta=0.246$, $p< 0.001$) and indirect effect of CPV on BL ($\beta=0.424$, $p< 0.001$) are both significant and there is change in the β-value (0.246 to 0.424) from that of the direct effect of CPV on BL ($\beta=0.246$, $p < 0.001$), supporting H16.

Table 6.25: MLM summary - Direct & Indirect, between and within effect

L	Effect		Hyp.	OV	Relationship				OV		β	SE	p value	MC 95% CI
2	B	D	H1		CCI	>	CPV				0.021	0.011	0.049	[0.000, 0.041]
2	B	D	H2A’		CCI	>	CEmp		con		0.020	0.009	0.031	[0.002, 0.038]
2	B	D			CCI	>			cont					
2	B	D			CCI	>			UP					
2	B	D	H5A’		CCI	>	Aw		Aw		0.019	0.007	0.009	[0.005, 0.033]
2	B	D			CCI	>			trust					
2	B	D	H7A		CCI	>	SE		SE		0.019	0.010	0.050	[0.000, 0.039]
2	B	D	H8A		CCI	>	Risk		risk		-0.013	0.017	0.457	[-0.046, 0.021]
1	B	D	H2B’	con	CEmp	>	CPV				1.093	0.076	0.000	[0.944, 1.241]
1	B	D		cont		>	CPV							
1	B	D		UP		>	CPV							
1	B	D	H5B’	Aw	Aw	>	CPV				1.102	0.242	0.000	[0.627, 1.576]
1	B	D		trust		>	CPV							
1	B	D	H7B	SE	SE	>	CPV				0.814	0.047	0.000	[0.723, 0.906]
1	B	D	H8B	risk	Risk	>	CPV				-0.593	0.088	0.000	[-0.765, -0.421]
1	W	D	H2B’	con	EEmp	>	CPV				0.858	0.023	0.000	[0.814, 0.903]
1	W	D		cont		>	CPV							
1	W	D		UP		>	CPV							
1	W	D	H5B’	Aw	Aw	>	CPV				0.673	0.035	0.000	[0.604, 0.742]
1	W	D		trust		>	CPV							
1	W	D	H7B	SE	SE	>	CPV				0.606	0.030	0.000	[0.547, 0.666]
1	W	D	H8B	risk	Risk	>	CPV				-0.212	0.046	0.000	[-0.301, -0.123]
1	W	D	H9		CPV	>	BP				0.638	0.029	0.000	[0.593, 0.707]
1	W	D	H10		CPV	>	BL				0.246	0.029	0.000	[0.620, 0.741]

1	W	D	H11		BP	>	BL				0.665	0.030	0.000	[0.606, 0.723]
2	B	D	H13A		CCI	>	BP				0.007	0.006	0.290	[-0.006, 0.019]
2	B	D	H13B		CCI	>	BL				0.004	0.007	0.552	[-0.009, 0.017]
1	B	D	H14A’		CEmp	>	BP				0.903	0.06	0.000	[0.781, 1.025]
1	B	D	H14D’		Aw	>	BP				0.903	0.14	0.000	[0.625, 1.180]
1	B	D	H14F		SE	>	BP				0.671	0.06	0.000	[0.559, 0.783]
1	B	D	H14G		Risk	>	BP				-0.250	0.062	0.000	[-0.372, -0.128]
1	W	D	H14A’		CEmp	>	BP				0.630	0.046	0.000	[0.539, 0.721]
1	W	D	H14D’		Aw	>	BP				0.426	0.04	0.000	[0.347, 0.504]
1	W	D	H14F		SE	>	BP				0.535	0.03	0.000	[0.481, 0.590]
1	W	D	H14G		Risk	>	BP				-0.048	0.028	0.088	[-0.102, 0.007]
1	B	D	H15A’		CEmp	>	BL				0.873	0.021	0.000	[0.483, 0.657]
1	B	D	H15D’		Aw	>	BL				0.746	0.107	0.000	[0.536, 0.956]
1	B	D	H15F		SE	>	BL				0.486	0.043	0.000	[0.401, 0.571]
1	B	D	H15G		Risk	>	BL				-0.134	0.051	0.009	[-0.235, -0.340]
1	W	D	H15A’		CEmp	>	BL				0.570	0.044	0.000	[0.571, 0.788]
1	W	D	H15D’		Aw	>	BL				0.447	0.044	0.000	[0.369, 0.525]
1	W	D	H15F		SE	>	BL				0.449	0.030	0.000	[0.390, 0.509]
1	W	D	H15G		Risk	>	BL				-0.041	0.024	0.085	[-0.089, 0.006]
2	B	InD	H12A’		CCI	>	CEmp	>		CPV	0.022	0.010	0.039	[0.001, 0.041]
2	B	InD	H12D’		CCI	>	Aw	>		CPV	0.021	0.008	0.012	[0.005, 0.037]
2	B	InD	H12F		CCI	>	SE	>		CPV	0.016	0.008	0.050	[0.000, 0.032]
2	B	InD	H12G		CCI	>	Risk	>		CPV	0.008	0.010	0.466	[-0.013, 0.028]
2	B	InD	H13A’		CCI	>	CPV	>		BP	0.013	0.007	0.050	[0.00, 0.027]
2	B	InD	H13D’		CCI	>	CPV	>		BL	0.014	0.007	0.050	[0.00, 0.028]
1	W	InD	H14F		CEmp	>	CPV	>		BP	0.238	0.034	0.000	[0.172, 0.304]
1	W	InD	H14G		Aw	>	CPV	>		BP	0.275	0.03	0.000	[0.221, 0.329]

1	W	InD	H14C		SE	>	CPV	>		BP	0.207	0.019	0.000	[0.169, 0.245]
1	W	InD	H14D		Risk	>	CPV	>		BP	-0.143	0.031	0.000	[-0.204, -0.082]
1	W	InD	H15A’		CEmp	>	CPV	>		BL	0.297	0.036	0.000	[0.227, 0.367]
1	W	InD	H15D’		Aw	>	CPV	>		BL	0.288	0.030	0.000	[0.229, 0.346]
1	W	InD	H15F		SE	>	CPV	>		BL	0.259	0.024	0.000	[0.212, 0.306]
1	W	InD	H15G		Risk	>	CPV	>		BL	-0.151	0.032	0.000	[-0.213, -0.088]
1	B	InD	H16		CPV	>	BP	>		BL	0.424	0.021	0.000	[0.382, 0.466]

Note(s):

N 2320 customers of 43 brand groups. CPV = customer perceived value, CCI = cross channel integration, CEmp - customer empowerment, SE - seamless experience, BP - brand preference, BL - brand loyalty, D - Direct effect, Ind - Indirect effect, B - between effect, OV - original variable, Hyp. - Hypotheses, MC - Monte Carlo, CI - Confidence Interval, L-Level. W - within effect, 2 - Level 2 & 1 - Level 1 in Multilevel modelling (MLM).

CEmp comprise of original variables of convenience, control, and ubiquitous personalization, Aw = awareneess, comprise of original variables of brand awareness and trust

Table 6.26: MLM summary - Moderating effect of CCI on various study variables

L	Effect		Hyp.	MV	Relationship			β	SE	p value	MC 95% CI	MC 90% CI
2	B	D	H17A	CCI	CPV	>	BP	0.060	0.033	0.070	[-0.005, 0.125]	[0.005, 0.114]
2	B	D	H17B	CCI	CPV	>	BL	0.038	0.033	0.253	[-0.027, 0.103]	
2	B	D	H18	CCI	BP	>	BL	0.013	0.018	0.464	[-0.022, 0.048]	

Note(s):

N 2320 customers of 43 brand groups. CPV = customer perceived value, CCI = cross channel integration, CEmp - customer empowerment, Aw - awareness, SE - seamless experience, BP - brand preference, BL - brand loyalty, MV - Moderating variable, D - Direct effect, Ind - Indirect effect, B - between effect, OV - original variable, Hyp. - Hypotheses, MC - Monte Carlo, CI - Confidence Interval, L-Level, W - within effect, 2 - Level 2 & 1 - Level 1 in Multilevel modelling (MLM). CEmp comprise of original variables of convenience, control, and ubiquitous personalization, Awareness (Aw) comprise of original variables of brand awareness and trust

Table 6.27: MLM summary - Moderated-mediation effects

L	Effect		Hyp.	MV	MO	Relationship					β	SE	p value	MC 95% CI	MC 90% CI
2	B	I	H19A’	CCI	M	CEmp	>	CPV	>	BP	0.076	0.042	0.069	[-0.006, 0.158]	[0.007, 0.145]
2	B	I	H20A’	CCI	M	CEmp	>	CPV	>	BL	0.065	0.038	0.090	[-0.010, 0.141]	[0.002, 0.128]
2	B	I	H21	CCI	M	CPV	>	BP	>	BL	0.040	0.020	0.043	[0.001, 0.078]	
2	B	I	H19A’	CCI	F	CEmp	>	CPV	>	BP	0.043	0.024	0.073	[-0.004, 0.091]	[0.004, 0.083]
2	B	I	H19D’	CCI	F	Aw	>	CPV	>	BP	0.036	0.020	0.069	[-0.003, 0.074]	[0.003, 0.068]
2	B	I	H19F	CCI	F	SE	>	CPV	>	BP	0.038	0.02	0.016	[0.007, 0.069]	
2	B	I	H20F	CCI	F	SE	>	CPV	>	BL	0.041	0.02	0.018	[0.007, 0.074]	
2	B	I	H21	CCI	F	CPV	>	BP	>	BL	0.05	0.03	0.071		[0.004, 0.095]
2	B	I	H19D’	CCI	S	Aw	>	CPV	>	BP	0.037	0.020	0.068	[-0.003, 0.037]	[0.004, 0.071]
2	B	I	H19G	CCI	S	Risk	>	CPV	>	BP	-0.016	0.008	0.050	[-0.033, -0.002]	
2	B	I	H21	CCI	S	CPV	>	BP	>	BL	1.230	0.15	0.000	[0.855, 1.605]*	

Note(s):

N 2320 customers of 43 brand groups. CPV = customer perceived value, CCI = cross channel integration, CEmp - customer empowerment, Aw - awareness, SE - seamless experience, BP - brand preference, BL - brand loyalty, I - Indirect effect, B - between effect, OV - original variable, MV - Moderating variable, Hyp. - Hypotheses, MC - Monte Carlo, CI - Confidence Interval, L-Level, MO - Multi-level moderation, M - Multi-level, F - First level, S - Second level, W - within effect, 2 - Level 2 & 1 - Level 1 in Multilevel modelling (MLM), CEmp comprise of original variables of convenience, control, and ubiquitous personalization, Aw comprise of original variables of brand awareness and trust

* MC 99% CI

6.8.2.7. Testing moderation

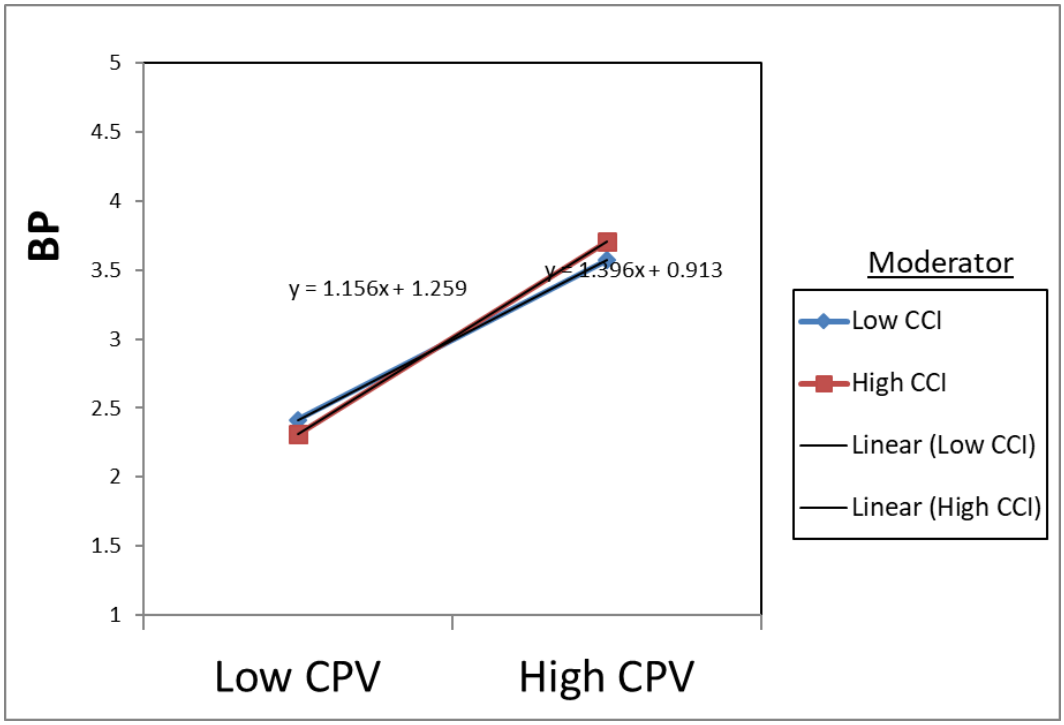
We predicted existence of a moderating effect of CCI on various relationship in the model.

We expected that CCI moderates the correlation of CPV with BP (H17A) and the relationship between CPV and BL (H17B). The result showed that CPV x CCI interaction effect on BP is significant (β= 0.06, $p < 0.1$, 90% CI = [0.005, 0.114]). This signifies the relationship between CPV and BP is stronger for brands that are at higher cross-channel integration stage that those in the lower. In accordance with Cohen et al. (2013), we plotted this interaction. As shown in Figure 6.5, when cross channel integration of brands was high, customer perceived value had a stronger relationship with brand preference than it did when cross channel integration of brand was low (γ = 0.45, p = 0.27). This indicated that the relationship between customer perceived value and brand preference for brands at higher level of cross channel integration than those brands with lower level of cross channe integration, supporting H17A.

However, the result showed that the CPV x CCI interaction on BL is not significant (β= 0.038, p = ns), not supporting H17B.

Also, H18 predicted that CCI moderates the relationship between BP and BL. The result showed that the BP x CCI interaction effect on BL is not significant (β= 0.013, p = ns), not supporting H16.

Figure 6.5: Plot of interaction between Customer perceived value and Cross channel integration on Brand preference



6.8.2.8. Testing moderated-mediation effects

Further, we predicted existence of a various moderated mediation effects in the model and thus we estimated the first-stage, second-stage and multi-stage moderated mediation models with CCI moderating various indirect relationship in the model. Results are in the Table 6.27.

We estimated the moderation effect of CCI on the indirect relationship between factors and BP through 1-1-1 CPV mediation (H19A-G) and found partial support. Supporting H19A', first-level moderation ($\beta = 0.043$, $p < 0.1$, 90% CI = [0.004, 0.083]), and multi-level moderation ($\beta = 0.076$, $p < 0.1$, 90% CI = [0.007, 0.145])

effects of CCI were found significant for indirect effect of CEmp on BP through 1-1-1 CPV mediation.

Further, in support of H19D', first-level moderation (β= 0.036, p < 0.1, 90% CI = [0.003, 0.068]), and second-level moderation (β= 0.037, p < 0.1, 90% CI = [0.004, 0.071]) effects of CCI were found significant for indirect effect of awareness on BP through 1-1-1 CPV mediation.

In support of H19F, first-level moderation (β= 0.038, p < 0.05, 95% CI = [0.007, 0.069]), effects of CCI were found significant for indirect effect of SE on BP through 1-1-1 CPV mediation.

In support of H19G, first-level moderation (β= -0.016, p < 0.05, 95% CI = [-0.033, -0.002]), effects of CCI were found negative and significant for indirect effect of risk on BP through 1-1-1 CPV mediation.

Support obtained for H19A', D', F & G indicates that for brands at higher cross channel integration the indirect effect of factor1-3 on BP is higher than those at lower cross channel integration stage and reverse for factor4, that is, risk.

We also estimated the moderation effect of CCI on the indirect relationship between factors and BL through CPV (H20A-G).

In support of H20A', multi-level moderation (β= 0.065, p < 0.1, 90% CI = [0.002, 0.128]), effects of CCI were found negative and significant for indirect effect of CEmp on BL through 1-1-1 CPV mediation. Also, in support of H20F, first-level moderation (β= 0.041, p < 0.05, 95% CI = [0.007, 0.074]), effects of CCI were found positive and significant for indirect effect of SE on BL through 1-1-1 CPV

mediation. Support obtained for H20A' & F (and not for B' & G), which indicates that for brands at higher cross channel integration the indirect effect of CEmp & SE on BL is higher than those at lower cross channel integration stage. Similar relationship for awareness & risk was not significant and hence H21D' & H21G was not supported.

Further, we expected a moderated mediation effect of CCI on the indirect relationship between CPV and BL through BP (H21).

Supporting H21, first-level moderation (β= 0.050, $p < 0.1$, 90% CI = [0.004, 0.095]), second-level moderation (β= 1.23, $p < 0.001$, 99% CI = [0.855, 1.605]), and multi-level moderation (β= 0.04, $p < 0.05$, 95% CI = [0.001, 0.078]) effects of CCI were found significant for indirect effect of CPV on BL through 1-1-1 BP mediation

6.9. Conclusion

This chapter offers an in-depth examination of quantitative data analysis for all the four studies. The survey instrument was enhanced by a pre-test, which assessed the reliability of the items using Cronbach's alpha and item-to-total correlation. The main survey gathers primary data through the use of a self-administered questionnaire for both industry expert on brand-related data and that from the customers of these brands for which industry-expert data was collected. The data received from the expert needs to be calculated to arrive at a number that represents cross channel integration level of brands. This was done differently for all the four studies. However various statistical tests are employed to the data received from the consumers of the brands and were analyzed through the following five distinct phases, though with some changes for different studies, as the first two requires multivariate approach and the next two configuration approach:

First, performed data screening and multivariate testing. During this stage, the data underwent screening to identify any missing data or outliers. The incidence of missing data is minimal and appears to be random; however, those were dropped. Though the sample size diminished by a small number, as adequate data was collected the aggregate sample size is still fairly higher than the threshold defined for such studies. All the assumptions of multivariate approaches were evaluated and found to be valid, except for the violation of multivariate normality as indicated by Mardia's coefficient. In order to address the issue of exceeding the maximum limit, a likelihood estimate technique is employed because of its adaptability and resilience in situations when the assumption of normalcy is violated. Also, multi-level modeling was utilized through Mplus 7.11, the outcome with which is still immune to the non-normal variable.

Secondly, the evaluation of the dependability and accuracy of the data was carried out. Exploratory factor analysis (EFA) was employed to streamline the data and ascertain the variables. First of all, test for common method bias was carried and found that the same is absent in our model. The result of EFA / CFA provided four factors against initial variables of seven in study, and three factors against intial variables of four, in the model. Further, the dependability of the construct was evaluated, and all of the constructs met or above the minimal threshold. According to the CFA, the measurement model shows a satisfactory fit, and modifying the model has enhanced the fit indices. Furthermore, the concept validity was evaluated by examining both convergent and discriminant validity.

Third, test was conducted to understand the structure of the data and found that the data is nested, as customer data is nested within brands. This was done through inter-class correlation technique. After this, decision was taken to follow multi-

level SEM modeling and deploy Mplus 7.11 software to carry out hypothesis testing instead of standard SEM through AMOS.

Fourth, this consumer-oriented data, along with the calculated data obtained from industry-expert on brands were collated an endogenity effect was examined. The data and the model were found free from endogenity or omitted variable influence.

Fifth, the measurement model is applied to the structural model to proceed ahead with carrying out descriptive statististics, correlation and AVE on all the variables of the model, and thereafter hypothesis testing. Test was conducted for direct, indirect (mediating) impact. Also, the test was conducted to understand moderation and moderated mediation impact of cross channel integration level of manufacturer-sponsor brands. Also, influence of all the considered control variables was examined.

Upon completing these procedures for data analysis, significant inferences may be made to elucidate the significance of the numerical findings from the statistical study.

The suggested theoretical model offers a comprehensive comprehension of the development of cross channel integration level of manufacturer-sponsor brands. The approach expands the position of the manufacturer-sponsor brands on their cross channel integration service capabilities by including various variables that represents consumer perceived value of these capabilities. The findings suggest that various cross channe integration of manufacturer-sponsor brands gets manifested into perceived value of customer that encompasses dimensions such as customer empowerment, awareness, seamless experience, risk. These perceived value playes a crucial role in determining or evaluation of the brands during the purchase journey

of customers. These perceived value then in turn influences brand behavior in terms brand preference and brand loyalty. This relationship is confirmed by the model.

Chapter Seven

Discussion of Analysis

7.1. Introduction

7.2. Discussion of the tested Hypotheses

7.2.1. Consequence of cross channel integration on customer perceived value

7.2.1.1. Explanation on significant positive relationship between CCI and customer empowerment

7.2.1.2. Explanation on significant positive relationship between CCI and awareness

7.2.1.3. Explanation on significant positive relationship between CCI and seamless experience

7.2.1.4. Explanation of significate positive relationship between CCI and overall CPV

7.2.1.5. Explanation of insignificant negative relationship between CCI and risk

7.2.2. Antecedents of overall customer perceived value

7.2.3. Consequence of overall customer perceived value

7.2.4. Moderation of cross channel integration

7.2.5. Moderated mediation

7.2.6. Consumer demographics

7.3. Research question Restatement

7.3.1. Research question related to the study 1 [Question no. 1]

7.3.2. Research question related to the study 2 [Question no. 2 to 5]

7.4. Conclusions

7.1. Introduction

The preceding chapter involved the empirical testing of the theoretical model given in this study, which aims to explain how cross channel integration of manufacturer-sponsor brands leads to the consumers formation of various perceived values, brand preferences, and brand loyalty. The empirical study yields the set of important variables for overall customer perceived value, brand preferences and brand loyaty. The application of multi-level structural equation modeling yields a final updated model that demonstrates the important connections between transformational brands' cross channel integration service capabilities, factors of customer perceived values, which then either directly or through overall customer perceived value influences brand preferences, and brand loyalty. Also, Brand preference has been established as an antecedent to brand loyalty. The objective of this chapter is to offer a comprehensive overview of the findings from the quantitative analyses done in the last chapter. By examining both the important and unimportant connections in the theoretical framework, the study determined if the research hypotheses were supported or refuted. The chapter is divided into two parts: comparing hypothesis testing outcomes with existing literature and examining how collected results can effectively meet study objectives.

7.2. Discussion of the tested Hypotheses

The final updated models consists of the following number of associations:
Study: Eight constructs, and eleven associations,

The study reveals that the consequence of cross channel integration on various factors of consumer perceived value such as consumer empowerment, awareness, perceived risk, and seamless experience. These factors of customer perceived values influences overall customer perceived values, which subsequently

influences both the consumer behavior of brand loyalty. Further, brand preference is an antecedents of brand loyalty.

Some of the component of customer demographics are correlated with certain perceived value, brand preference, and loyalty in the multivariate study.

7.2.1. Consequence of cross channel integration on customer perceived value

In the first seven hypotheses it was predicted that the cross channel integration has a substantial and favourable influence on various factors of customer perceived value such as awareness, convenience, trust, control, perceived risk, seamless experience, ubiquitous personalization. However, the model was transformed after conducting CFA and through the modified hypotheses thus formed it was expected through four hypotheses that cross channel integration significantly impact these three original factors of customer perceived value of trust, perceived risk, and seamless experience, and one newly formed factor of customer empowerment by combining items of convenience, trust, and control.

Hypotheses pertaining to customer empowerment, awareness and seamless experience was supported but that for perceived risk was not supported.

7.2.1.1. Explanation on significant positive relationship between CCI and customer empowerment

In our modified model customer empowerment, which comprise of the three construct that includes the elements of control, personalization, and convenience (Alshibly & Chiong, 2015). It is derived from the existing literature that associates consumer empowerment with allowing customers to have control over variables traditionally determined by marketers (Wathieu et al., 2002). The concept of empowerment is connected to notions of control and convenience in consumer

behavior research, e.g., Broniarczyk and Griffin (2014), while psychological studies highlight the relationship between empowerment and the perception of control (Schiffman and Kanuk, 2009).

There are certain studies that has studied the association of cross channel integration with control (e.g., Goersch, 2002; Hoffman and Novak, 1996; Shao and Lassleben, 2021; Martin et al., 2015; Rose et al., 2012; Rippe et al., 2016), personalization (Shi et al., 2020; Piotrowicz and Cuthbertson, 2014; Peltola et al., 2015); Juaneda-Ayensa et al., 2016; Tam & Ho, 2006; Ball et al., 2006), and convenience (Geng & Chang, 2022; Mirsch et al., 2016; Seiders et al., 2007; Jin and Kim, 2003; Berry et al., 2010; Viswanathan, 2005; Shankar et al., 2021; Won-jun Lee, 2020; Mpinganjira, 2014) but seems sparingly there's any study on empowerment such as Le and Nguyen (2020), Mishra et al. (2023), Goraya et al. (2022), M. Zhang et al., (2018). But, those that has studied empowerment, the impact of multichannel has not been studied, rather these studies studied impact of empowerment on consumer behavior. Further, the studies on control, personalization, and convenience has been in the setting different than this study. In the context of retail, Goersch, 2002 has through a conceptual work associated multichannel to control by arguing that multichannel reinforces a sense of self-control as has freedom to use different channels in different situations. Neslin and Shankar, 2009 argues that the consumer gains control over their purchase by using website to search and then visiting retailer to touch and feel the product, and then finally make a purchase in a private settings. Shao and Lassleben, 2021 suggests that the omnichannel integration alleviates impulsive consumption by increasing the transparency of the shopping process, thus giving consumers more control over it.

Further, impact of multichannel on control has been discussed through different construct of variety seeking (Emrich, et al., 2015), involvement (Kleinlercher et al., 2020), self efficacy (E. Kim et al., 2017), hunting, immediate possession, shopping efficiency,variety seeking (Aw, 2019), personal innovation (Juaneda-Ayensa et al., 2016), involvement (Pizzutti et al., 2022; Haridasan et al., 2021); Self-expressiveness value (Yoo and Park, 2016).

Further, impact of multichannel on convenience has been discussed through different construct of easy-of-use, usefulness, and channel accessibility (Ha and Stoel, 2009; Silva et al., 2018; Martin et al., 2015; Hyo and Hyeon, 2023; Elareshi et al., 2023),

Further, impact of multichannel on personalization has been discussed through different construct of perceived compatibility (E. Kim et al., 2017)

So, we understand that this is among the first studies that has studied infuence of cross channel integration on customer empowerment and the relationship is significant, which confirms the association.

7.2.1.2. Explanation on significant positive relationship between CCI and awareness

During the study it was intended that the correlation of cross channel integration with awareness is favourable and statistical significant. This study has confirmed the same. Also, there are not many studies that has studied in the context of multi channel and that too as the influence of the cross channel integration of either retail or brand or manufacturer-sponsor brands.

Our results support the previous literature that argues that the cross channel integration service enables consumers to conveniently gather the necessary information, reducing their perceived information asymmetry with varying degree of impacts at different phases (Cao and Li, 2015). Furher it support the argument provided by the extant literature such as by integrating branding and communication across channels, brand awareness and recognition are enhanced (Yeğin and Ikram, 2022). Further, our study confirms that the customers can expand their initial consideration set by seeking information from various touchpoints and channels, such as peers, reviewers, and retailers, (Gao et al., 2019), if the retailers have embarked on to the journey called omnichannel.

A body of literature studied awareness using different constructs but implying the similar meanings. These are price information retrieval (Shiva et al., 2008), informative content (Fernandes et al., 2020), information quality (Abbasi et al., 2023), information search (Pizzutti et al., 2022), production information (Pham and Ahammad, 2017), research and info search (Close and Kukar-Kinney, 2010), information (Kim and Kandampully, 2009)

7.2.1.3. Explanation on significant positive relationship between CCI and seamless experience

The study aimed to investigate the influence of cross channel integration on seameless experience. The analysis confirmed the relationship. This result is in line with the other studies and support the same, one of which suggests that the integration of channels allows customers to initiate their purchase journey on one channel and transition to another (Zarantonello and Schmitt, 2010), resulting in a seamless experience of convenient and engaging experience. This result also support the influence of the cross channel integration on construct that is similar to

the brand experience, which suggests that this continuity across channels ensures a consistent brand experience across different channels (Eaglen, 2013).

This result is also in consistent with other studies that proposes that the brand omnichannel strategy creates seamless experience for customer during their shopping journey (A. Mosquera et al., 2017; Verhoef et al., 2015; Mika Yrjölä et al., 2018), with the difference that these studies studied retailer brands, unlike our's that did on the manufacturer-sponsor brands.

Further, there is a body of extant literature that has studied 'experience' by taking into account certain specific cross channel integration capability, such as Gao and Fan (2021) explored impact of omnichannel consistency on customer experience, Chen et al. (2022) examined influence of omnichannel collaborative marketing on shopping experience, and Swoboda and Fränzel (2022) examined the relationship of the omnichannel integration quality on online shopping experience, but does not incorporate comprehensive model of cross channel integration for conducting such studies, and that too for the manufacturer-sponsor brands, unlike this study.

7.2.1.4. Explanation of significate positive relationship between CCI and overall CPV

In the first hypothesis, it was expected that the association between cross channel integration and overall customer perceived be positive. This came out to be siginificant, supporting the conceptual proposition provided by the Goersch (2002)'s study that indicates that an increasing number of retailers (brands) are adopting multichannel integration services due to the superior advantages it offers over separate channels (Gulati and Garino, 2000). Goersch (2002), through application of "Purchase and Consumption" (PCP) theory propounds the model that relates "multichannel integration" to "consumer benefit".

Also, the outcome is in line with the extant literature that suggests that an omnichannel transformation through integrated-channel services enhances customers perceived value (e.g., Chen and Chi, 2021; Huré et al., 2017; Kumar and Reinartz, 2016; Leroi-Werelds et al., 2014) in the retail context, which, through this study has been extended to the context of the manufacturer-sponsor brands.

7.2.1.5. Explanation of insignificant negative relationship between CCI and risk

The extant literature on this association provides all the three different kind of outcome. This is discussed in the following sections, and subsequently provides reason for such inconsistency.

7.2.1.5.1. Perceived Risk increases with the omni channel strategy deployment by channels / brands:

A possible explanation for this relates to the fact that we are studying a population of Internet users that are, in most cases, also smartphone users. Even for those with most basic patterns of usage, adopting an Omni channel approach would not greatly increase the risks that arises from internet usage in general and, thereby, to which they are already exposed, regardless of whether they are Omni channel customers. The same applies to the case of decrease in risk for Omni channel customer.

Some of the extant literatures that has obtained positive association between Omni channel and perceived risk are Chen & Chi, 2021; Song & Jo, 2023; Trenz et al., 2020. Further, privacy risk positively and significantly impact perceived risks (S. Chatterjee et al., 2021), which can diminish the positive outcome of Omni channel retailing (Thaichon et al., 2023).

7.2.1.5.2. Omni channel strategy deployment by channels / brands results into a reducing perceived risk of consumers:

A body of a literatures has studied several dimensions of risk in the context of an OMC that are an extension of online risks (e.g. (Katta & Patro, 2017) or offline channel risk (e.g. (R. N. Stone & Barry Mason, 1995). These are availability risk (Gallino & Moreno, 2014; Wollenburg et al., 2019), time risk (Bezes, 2016; J. Park & Kim, 2007; Thakur & Srivastava, 2015); economic risk, social and privacy risk (Sirrka L. Jarvenpaa & Todd, 1996), personal and performance risk (Jarvenpaa and Todd, 1996).

Implementation of omni channel has potential to diminish the risk by making various integration efforts like availability risk can be neutralized by information integration (Gallino & Moreno, 2014; F. Gao & Su, 2017), channel integration (Bendoly et al., 2005).

Further, Consumers can have safe and secured shopping experience by using combinations of channels as can gain from the benefits it provides and overcome the deficiencies of an individual channels (Zhang et al., 2010). Also, integration and consistency of Branding across channels in cross channel integrated brands allows consumer to transfer positive brand image associated with one channel to another (Dholakia and Zhao, 2010), which might thereby mitigate customers' perceived risk regard to brand choices (Kwon and Lennon, 2009).

Further examples of the literature that has established negative significant relationship between OMC and perceived risk are Emrich et al., 2015; Ghotbabadi et al., 2016; Herhausen et al., 2015; Ortlinghaus & Zielke, 2019; Truong, 2021, Sun, 2016.

7.2.1.5.3. No significant association between Omni channel and perceived risk:

Apart from various studies that has either obtained positive or negative association between OMC and perceived risk, there are a body of extant literatures that has not found any such associations like Cattapan & Pongsakornrungsilp, 2022; Chen & Chi, 2021; Silva et al., 2018; Trenz et al., 2020. This indicates the literature has provided various contradictory outcomes of this association, which indicate presence of certain moderators that are playing an instrumental role in such changes in the same relationship in the same context.

7.2.1.5.4. Literature's guidance on such inconsistent association

Literature provides the reason for the same by revealing the existence of five major dimensions that influences it, viz; (1) Type of OMC resources deployed or integration implemented, (2) Purchase-journey phase (3) Product category, (4) Consumer type in terms of their education, age, and Omni channel savviness, and (5) Image of the focal brand. Detailed explanation of these moderators are provided below:

7.2.1.5.4.1. Omni channel channel (OMC) Dimensions:

By reviewing literature it is observed that the past studies have obtained varied results on the above association by varying dimensions of OMC capabilities of channels. For example, Cattapan and Pongsakornrungsilp, 2022 obtained significant negative association between OMC and perceived risk while considering dimensions like integrated product and price, Integrated promotion, integration information access but did not obtain significant association while studying dimensions like Integration transaction information, order fulfillment, and customer service.

Similar outcome was obtained in the study of Chen and Chi, 2021 as dimensions of Integration order fulfilment, and transaction information do not have significant association with perceived risk but that of integrated product and price, promotion, and customer service have significant negative relationship, and Integration information access has significant positive relationship.
This suggests that the same study can give different results by varying consideration of dimensions of OMC under the study.

Our study has taken holistic approach and considered all the dimensions of OMC as suggested by the literature till this date, and adopted scale of Cao & Li (2015). Consideration of these dimensions into our study has a role to play in obtaining insignificant association between OMC and perceived risk as these dimensions provide all the three kinds of results, viz; positive significant, negative significant, and insignificant.

7.2.1.5.4.2. Purchase-decision making Phase:

Trenz et al., 2020 study found that there is no support obtained for influence of Omni channel or multichannel improvements on risk likelihood during acquisition (transaction) phase, and partial support was obtained on its influence on risk severity during acquisition phase if implemented as immediate pickup. Contrarily to this, support obtained on its influence on risk likelihood and severity during recovery (post-purchase) phase.

Our study has been studied for all the three phase of customer decision-making process and has adopted risk dimension from the study of Trenz et al., 2020, which comprises of a risk likelihood and risk severity. As seen in the study, as decision-making phase moderates the kind of association, our results are consistent with it.

7.2.1.5.4.3. Product category

(E. Kim et al., 2017) informed that the consumer perceived online risk is moderated by situational factors and the product type. This suggested that the product category has a significant impact on the of OMC with perceived risk.

We studied eight various product categories of air conditioners, home appliances, consumer electronics, mobile, consumer electrical, hair and skin care, packaged food, and apparel & fashion and as it comprises of both the kinds of a high-involvement and low-involvement products, there is probability that the results of association between OMC and perceived risk is not towards any one direction.

7.2.1.5.4.4. Consumer type:

Lynch & Barnes (2020) propounded that an Omni channel decision-making journey is the one that is predicated on risk and that consumers employ specific strategies to avoid such risks. This indicates while there is positive correlation between Omni channel and risk, the same can be weakened by individual-based strategies, resulting into an insignificant relationship.

7.2.1.5.4.5. Focal brand type:

Prior research has indicated that customers' perception of uncertainty while using a service, which is influenced by their perception of risk, may be diminished by a retailer's reputation, trustworthiness, and past transactions (Dimoka et al., 2012; P. Pavlou & Liang, 2007). These studies assert that a retailer's Customer Channel Integration (CCI) can decrease uncertainty and perceived risk by allowing the shop to establish additional touchpoints, hence building a favorable brand reputation (Keller, 2010; Kwon & Lennon, 2009) and build positive brand image (Ghotbabadi et al., 2016).

In our study as we have studied reputed & established brands that has already mitigated perceived risk through their image building action, there's very little remained to be done through deploying Omni channel strategy on this front

7.2.2. Antecedents of overall customer perceived value

The study confirms significant association of all the four construct of customer empowerment, awareness, seamless experience and perceived risk, with first three posively relate and perceived risk, negatively related. This provides a confirmation on the proposed hypotheses. There are extant literature that has provided the association of one of these at a times and mostly in the context other than cross channel integration. With this study we extend the literature across cross channel integration and customer perceived value by examining the association.

Association of customer empowerment with overall customer perceived value supports the prior studies through ubiquitous personalization such as Goersch (2002), who conceptualized ubiquitous personalization as the perceived value that consumers seek to pacify their customization needs. It also support prior studies that considers personalization as one of the factors of value derived from CCI (e.g., Hubert et al., 2020). Further, this study aligns with the prior literature that considered personalization as one of the aspects that improves customer shopping experience (J. Y. M. Kang et al., 2015; C. Xu et al., 2015) and hence perceived value of the omnichannel integration. Further, the association of customer empowerment with overall customer perceived value supports the prior studies through convenience such as Geng and Chang (2022) who suggested that convenience is one of the the utilitarian value and the main driver of consumers' omnichannel shopping, Shankar et al. (2021) proposed that convenience has a significant role to play in developing an intention of showrooming and that overall CPV mediates this relationship. Our study aligns with the literature, which posited

that “convenience” is one of the element of a perceived value and the prior impacts the latter in an Omnichannel context (Park and Kim, 2022; Pereira et al., 2023). The association of customer empowerment with overall customer perceived value supports the prior studies through control such as Leckie et al. (2017) that considered control as one of the component factor of CPV and it provides value in three ways: behavioural control, cognitive control, and decisional control. Our study aligns with the prior literature and fall apart on the context of manufacturer-sponsor brands, consideration of comprehensive cross channel capabilities measurement of the actual practicing brands.

Similarly, there are literature that supports our findings on the customer perceived value factors such as awareness, seamless experience, and perceived risk. Our study support the previous studies have shown that “ greater awareness” contributes to a higher CPV in various ways, for example; cognitive (Lapierre, 2000; Sweeney et al., 1999), extrinsic – as per axiology of value theory (Danaher and Mattsson, 1994; De Ruyter et al., 1997; Lemmink et al., 1998), utilitarian (Babin and Attaway, 2000; Chiu et al., 2005). Finding of our study is supported by a body of literature in the context that suggests that seamless experience is a construct that consumers perceive as value. These studies includes online shopping experience (Chen and Dubinsky, 2003), and personalized customer experience (Kim et al., 2019). On perceived risk, extant literature suggests that consumers can have safe and secured shopping experience by using combinations of channels as can gain from the benefits it provides and overcome the deficiencies of an individual channels (Dholakia and Zhao, 2010; Zhang et al., 2010). Also, prior research has prove that the risk consumers perceived when purchasing products online could be reduced by channel integration (Savastano et al., 2019; Wu and Chang, 2016), and channel synergy (Herhausen et al., 2015; Yang Li et al., 2020; Xu and Jackson, 2019). However, the relationship between perceived risk and customer perceived have

came up as negative and significant in this study, that supports its inclusion by Chen and Dubinsky (2003) in the model of CPV.

7.2.3. Consequence of overall customer perceived value

Our hypotheses of impact of overall customer perceived value on both brand preference and brand loyalty has been supported, which confirms that when a customer perceives the value derived from the attributes of a CCI services, the customer develops a preference and builds into loyaly. This supports the prior literature such as Alamro & Rowley (2011) and (Hellier et al., 2003) that has empirically related overall customer perceived value with brand preference. The association between customer perceived value and brand loyalty supports the body of prior literature such as Rahi, 2016.

There are numerable studies that has established such relationship, some of which are in the context of multichannel and other are not. However, those who have studied this prior to this study has done so in a different context than this study did.

This thesis comprise of the study on meta-analysis, written in chapter 2, on the consequence of customer perceived value on brand preference and brand loyalty, termed as customer decision outcome. It has enlisted several empirical studies that has established this relationship that we did here. However, this relationship is only a piece in the whole model, which is unique as discussed earlier.

7.2.4. Brand preference and brand loyalty

In the context of cross channel integration, this study empirically establishes the positive association between brand preference and brand loyalty, which aligns with other study in monochannel retail context such as Keh et al. (2007), which suggests that the consumers with high BP would have stronger affective attachment for the

brand, further previous studies have supported a positive relationship between BP and BL (Chaudhuri and Holbrook, 2001), and that the relationship between BP and BL is robust with prior having strong effect on the latter (Chinomona and Pooe, 2013; Keller, 2008), but in the monochannel context.

7.2.5. Moderation of cross channel integration

We predicted existence of a moderating effect of cross channel integration on various relationship in the model. Through hypothesis H17 we expected that CCI moderates the relationship between factors and CPV. The result showed that the factors x CCI interaction effect on CPV was statistically not significant [customer empowerment (β=-0.005, p=ns), awareness (β=0.045, p=ns), SE (β=0.028, p=ns), risk (β=-0.166, p=ns)], not supporting H17A-G.

Further, we expected that CCI moderates the correlation between CPV and BP (H18A) and the relationship between CPV and BL (H18B). The result showed that CPVxCCI interaction effect on BP is significant (β=0.06, p<0.1, 90% CI=[0.005, 0.114]). This suggest that the favourable correlations between CPV and BP is stronger for brands that are at higher CCI than those in the lower.

However, the result showed that the CPVxCCI interaction on BL is not significant (β=0.038, p=ns), not supporting H18B. Also, H16 predicted that CCI moderates the relationship between BP and BL. The result showed that the BPxCCI interaction effect on BL is not significant (β=0.013, p=ns), not supporting H16.

This concludes that the cross channel integration moderates the association between customer perceived value and brand preference, which further extend to the body of knowledge on the positive role of the cross channel integration.

7.2.6. Moderated mediation

We predicted existence of a various moderated mediation effects in the model and thus we estimated the first-stage, second-stage and multi-stage moderated mediation models with CCI moderating various indirect relationships in the model.

Indirect effect of customer empowerment, awareness, seamless experience, and risk perception on brand preference through customer perceived value is support. This indicates that for brands at higher cross channel integration the indirect effect of customer empowerment, awareness, and seamless experience on brand preference shall be higher than those at lower CCI level. This also implies that indirect negative effect of perceived risk on brand preference through customer perceived value shall be lower for the brands in their higher level of cross channel integration than those that are in the lower levels. This supports the extant literature that suggests that the consumers can have safe and secured shopping experience by using combinations of channels as can gain from the benefits it provides and overcome the deficiencies of an individual channels (Dholakia and Zhao, 2010; Zhang et al., 2010). Futher, this study provides empirical evidence to support that the risk consumers perceived when purchasing products online could be reduced by channel integration (Savastano et al., 2019; Wu and Chang, 2016), and channel synergy (Herhausen et al., 2015; Yang Li et al., 2020; Xu and Jackson, 2019).

Further, through customer perceived value positive and significant moderation effect of CCI obtained in the indirect relationship of customer empowerment, and seamless experience with brand loyalty. This means that for brand that are in their higher level of cross channel integration, the indirect influence of both; seamless experience and customer empowerment on brand loyalty will be higher, than those lower in their cross channel integration level.

Also, we find positive and significant moderation effect of CCI on the indirect relationship of overall cutomer perceived value and brand loyalty. This means that for brand on their higher level of cross channel integration shall have strong association of overall customer perceived value with brand loyalty, then those brands in their lower level of integration.

7.2.7. Consumer demographics

The study considered consumer demographics as a control variable as prior studies have examined association of these variables of age, education, family size, gender, and income on studied consumer variables of factors and overall customer perceived value, brand preference, and brand loyalty.

The result of the study on consumer demographics suggests existence of the significant positive correlations between Age and customer empowerment (β=0.166, $p<0.001$), awareness (β=0.12, $p < 0.001$), and seamless experience (β=0.188, $p<0.001$). Positive and significant correleation obtained between education and customer empowerment (β=-0.11, $p < 0.001$), seamless experience (β=-0.152, $p<0.001$), and perceived risk (β=0.274, $p<0.001$). Family size has been seen to be correlated with brand preference (β=0.095, $p<0.001$). Further, statistical significant and positive correlation was found between education and brand loyalty (β=0.048, $p<0.05$), gender and customer empowerment (β=-0.096, $p<0.05$), awareness (β=-0.118, $p<0.05$), seamless experience (β=-0.079, $p<0.05$), and perceived risk (β=0.096, $p<0.05$). This study did not find association of education with awareness, and brand preference. Similarly, no correlation found between age and perceived risk, brand preference, and brand loyalty. No association established in this study between family size and awareness, seamless experience, customer empowerment, risk, and brand loyalty. Also, no association found between gender and brand preference, and brand loyalty.

Finally, no association found between income and with any of the studied variables of customer empowerment, awareness, seamless experience, perceived risk, brand preference, and brand loyalty

The outcome of the study reconfirms existence of association aligning with the prior studies on this, as cited in the chapter 4, section 4.4.

7.3. Research question Restatement

The research challenge, as outlined in chapter one - introduction, is tackled through thirteen primary inquiries, which are:

1. What factors of customer perceived value influences consumer behavior, in terms of intra-stage consumer decision outcome, when the retailers or brands operate through multichannel distribution strategy?
2. To identify factors of customer perceived value that mediate the relationship of cross channel integration with brand preference and brand loyalty,
3. How consumer perceived value is associated with manufacturer-sponsor brands' cross channel integration capabilities and preference & loyalty in the same context?
4. Which dimension of customer perceived value has more bearing on the manufacturer-sponsor brand cross channel integration capabilities than others?
5. What specific areas (in terms of providing enhanced perceived value) can retailers and brands prioritize in order to improve consumer behavior, specifically in terms of influencing brand preference and brand loyalty in their favor?
6. How elements of consumer perceived value is associated with manufacturer-sponsor brands' cross channel integration capabilities and preference & loyalty in the same context?

The study objectives were addressed by constructing a theoretical framework that elucidates the relationship of cross channel integration with various factor and overall customer perceived value as the primary objective of the thesis, and study. Subsequently, the influence of the overall customer perceived in study and that of various factors of customer perceived on brand preference, and brand loyalty have been studied to obtain the desired result. Only one expected association between cross channel integration and perceived risk was not met, reasons for the same have been highlighted in the preceeding sections. Utilizing quantitative research method, first the questionnaire were established based on the prior studies by taking into account the variations among respondents in the study setting. The second part involves test of these formulated research hypothesis. The findings of hypothesis testing offer valuable insights into cross channel integration of manufacturer-sponsor consumer brands in the context for four different product categories of air conditioners, home appliances, consumer electronics, consumer electricals, mobile phones, hair and skin care, packaged food, and apparel and fashion, specifically among omnichannel users in India, where the study was done. These insights facilitate the attainment of ideal solutions to the study inquiries. The findings of the hypothesis testing may be summarized as follows:

A. Consumer perception of cross channel integration of manufacturer-sponsor brands, and their their behavioural responses are important to understand the implication of omnichannel strategies
    - All the studied dimensions of customer perceived values has positive and significant effect of cross channel integration except perceived risk, measured through the brands at different levels of integrationness. This indicate that integration of channels has influencing power to change perceived of consumers and shaping consumer behavior.

- Deviation of perceived risk factor of customer perceived value has been discussed in details in the preceeding section. This is dynamic in these times as the findings of the literature provides inconsistent relationships, driven by the technological development, shift in the consumer behavior, and information explosion.

- The mediating role of the factors and overall perceived value have been established, which confirms the role of cross channel integration on consumer behavior of brand preference and brand loyalty through them.

B. Meta-analysis results shows that various factors of customer perceived value have a significant association with the customer decision output, in the context of the multichannel. This provide a strong justification and support for integration of channels as it has necessary powers to shape consumer behavior across various metric of preference, use, intent, reuse, repurchase, loyalty.

C. Consumer demographics: Existence of various associations have been discussed in the preceeding section, suggesting existence of association between these variables with the studied variable. However, in the empirical study, these dimensions have been controlled.

7.3.1. Research question related to the study 1 [Question no. 1]

7.3.1.1. What factors of customer perceived value influences consumer behavior, in terms of intra-stage consumer decision outcome, when the retailers or brands operate through multichannel distribution strategy?

This question seeks to find out relationship between various factors of customer perceived value with consumer decision outcome (CDO), which is referred to an

individual or series of intra-stage decision made during a purchase-decision process of a consumer behavior including preference, intent, choice, purchase, use, and loyalty. The answer to question has been obtained by conducting a systematically reviews and synthesize findings from existing studies in the context of the highly cross channel integrated environment, alternatively referred to as OMC. This study presents a meta-analysis that was conducted on 384 effect sizes from 94 studies, which were selected from a pool of 875 identified studies on CDO. Through this study, we identified factors of customer perceived value, comprising of awareness, risk, convenience, trust, control, ubiquitous personalization (UP), seamless experience (SE), and overall CPV and examined their relationship with the CDO within an OMC setting. The search for relevant studies was limited to October 2023.

The study concludes that all eight discovered correlations, namely CPV, awareness, risk, convenience, trust, control, ubiquitous personalization (UP), and seamless experience (SE), are statistically significant. Our study indicates that the cumulative overall customer perceived value (CPV) has the greatest influence on the customer decision outcomes (CDO), with a significant impact of 18.4%. This impact is 27% more than the impact of the CPV component of seamless experience, whose impact is 15.5% on CDO, which has the second biggest influence. The impact of ubiquitous personalization (UP), trust, control, and convenience ranges from 13.6% to 13.7%, with the highest impact being 13.7% and the lowest being 13.6%. The risk has the least impact, with a negative 2.9%. The impact of awareness on CDO is 9.6% impact.

So, the findings of the study by answering the stated questions, not only concludes impact of the identified factors of customer perceived value on customer decision outcome, but also provide relative impact of these factors on the customer decision

outcome. This shall help retailers and brands to assess the cross channel capabilities and tweek it for generation of the kind of perceived value that impacts customer decision outcome, the most.

7.3.2. Research question related to the study 2 [Question no. 2 to 5]

We identified the following four questions from the gap in the literature, which is discussed at-length in the introduction section. We conducted quantitative analysis wherein multilevel modeling was adopted as a analytical methodology and primary data collected from two different sources of expert and consumer, to answer these questions. The questions are produced below:

7.3.2.1. To identify factors of customer perceived value that mediate the relationship of cross channel integration with brand preference and brand loyalty,

The study identified factors of cutomer empowerment, awareness, seamless experience, and perceived risk, that are linked with overall customer perceived value. Further, association established between overall customer perceived value and brand preference and loyalty.

We also established that the overall customer perceived mediate the association of cross channel integration with brand preference, and brand loyalty, simultaneously. This answers this question.

This study expands understanding of customer behavior outcomes throughout different stages of the purchase journey, influenced by a brand's omnichannel strategies. The framework developed in this study incorporates a series of events starting from the cross channel integration to customer evaluation, pre- and post-

purchase decisions. By evaluating multiple brands across industries through industry experts and categorizing them into four cross channel integration levels, we demonstrate the favourable and substantial influence of omnichannel strategies on customer perception of enhanced customer empowerment, awareness, and seamless experience. These positive perceptions, in turn, lead to brand preference and ultimately brand loyalty. Furthermore, we find that omnichannel strategies do not significantly influence negative value perceptions related to risk. We also highlight that omnichannel moderates the direct influence of perceived value on brand preference, and the indirect influence of enhanced customer empowerment, awareness, and seamless experience on brand preference and brand loyalty. Additionally, we demonstrate that omnichannel moderates the indirect influence of perceived value on brand loyalty

7.3.2.2. How consumer perceived value is associated with manufacturer-sponsor brands' cross channel integration capabilities and preference & loyalty in the same context?

The study found direct association of the identified factors of customer empowerment, awareness, seamless experience with cross channel integration of manufacturer-sponsor brands. Though association between cross channel integration of manufacturer-sponsor brands with perceive risk could not be established, reasons for the same have been discussed.

Further, the association of these four factors of customer perceived value with brand preference, and brand loyalty have been established through a mediating role of overall customer perceived value.

Also, the mediating role of the overall perceived value have been established, where it mediates the association of cross channel integration of manufacturer-sponsor brands with brand preference, and brand loyalty, simultaneously.

7.3.2.3. Which dimension of customer perceived value has more bearing on the manufacturer-sponsor brand cross channel integration capabilities than others?

From the direct impact of the cross channel integration, we could conclude that the influence of CCI on overall customer perceived value is the highest, followed by customer empowerment. Impact on awareness and seamless experience have been similar and the lowest.

Further, there's indirect effect of cross channel integration on overall customer perceived value, through various factors of overall customer perceived value, with that through customer empowerment is the highest, followed by awareness, seamless experience and risk.

7.3.2.4. What specific areas (in terms of providing enhanced perceived value) can retailers and brands prioritize in order to improve consumer behavior, specifically in terms of influencing brand preference and brand loyalty in their favor?

The investigation reveals that all factors of customer perceived value, as well as overall customer perceived value, have a simultaneous impact on both brand preference and brand loyalty. Overall customer perceived value influences brand preference more as compared to its influence on brand loyalty. Though not hypothesized, from among the factors of customer perceived value, awareness and customer empowerment equally and strongly associate with brand preference, and

over that of seamless experience. However, association of these three factors with brand loyalty is lower than that of brand preference.

So, in a nutshell retailers and brands to focus more on customer empowerment, followed by spreading awareness. Thereafter, they should focus on the overall customer perceived value and then seamless experience comes into play. Similarly is the case even if the indirect effects of these factors are considered on brand preference, and brand loyalty through the overall customer perceived value.

Risk is negatively associated with brand preference, but is insignificant with brand loyalty. So, retailers and brands should address this by working out solution that mitigate the perceived risk.

7.4. Conclusions

This chapter analyzes the research hypotheses and discusses the significant findings of the study that provide answers to the research challenges. This study illustrates that the cross channel integration influences various elements of customer perceived value including customer empowerment, awareness, seamless experience. Though the influence of cross channel integration in the context of the manufacturer-sponsor consumer brands cannot be established.

Further, in the context of the cross channel integration brand preference and brand loyalty may be created from various distinct sources: overall customer perceived value. This encompasses both rational and irrational aspects of consumer behavior, as individuals engage with brands through their sensory perceptions and emotional responses. This also leads to the understanding that consumers have a preference for brands that deliver seamless experiences, consumer empowerment, and awareness, that aligns with their expectations, in the specific contect of

omnichannel integration, which can be extrapolated to the general context, as well. This is also applied for brand loyalty. Hence, the information, seamless experience, convenience, and empowerment, that consumers acquire and sense of dealing with a reputed brands form s the foundation of their evaluative assessment, which in turn shapes their preference. An encouraging result of these preferences is the evident drive towards favorable repeat purchasing behavior, and loyalty.

Also, we have seen how various combinations of dimensions of cross channel integration capabilities leads towards brand loyalty, with different paths based on the industry .

Chapter Eight

Conclusions

8.1 Introduction

8.2. Research Contributions

8.2.1. Theoretical Implications

8.2.2 Methodological Implications

8.2.3. Managerial Implications

8.3 Research Novelty

8.4. Research Limitations

8.5 Proposals and recommendations for Future Research

8.1. Introduction

This chapter begins by providing an overview of the study and building a link between the research findings and the theory through theoretical contributions. Subsequently, it directs the focus of management towards potential strategies and consequences in order to acquire a competitive edge. In light of these consequences, the research uniqueness is examined, highlighting the notable contributions made by this research. The chapter concludes with a thorough evaluation of the research methodology utilized in this study and their limitations, along by recommendations for future research in the areas of cross channel integration, consumer behavior, and branding.

8.2. Research Contributions

This study expands understanding of customer behavior outcomes throughout different stages of the purchase journey, influenced by a brand's omnichannel strategies. The framework developed in this study incorporates a series of events starting from the CCI to customer evaluation, pre- and post-purchase decisions. By evaluating multiple brands across industries through industry experts and categorizing them into four CCI levels, we demonstrate the favourable influence of Omni channel strategies on customer perception of enhanced customer empowerment, customer-based brand equity, and seamless experience. These positive perceptions, in turn, lead to BP and ultimately BL. Furthermore, we find that Omni channel strategies do not significantly influence negative value perceptions related to risk.

We also highlight that Omni channel moderates the direct influence of perceived value on BP, and the indirect influence of enhanced customer empowerment, “customer-based brand equity”, and seamless experience on brand preference and

brand loyalty. Additionally, we demonstrate that Omni channel moderates the indirect influence of perceived value on brand loyalty.

This research presents a framework that focuses on the demand side of businesses' omnichannel strategy. It contributes to the fields of customer experience, omnichannel theory, and brand theory, as well as providing practical insights for managers. The specific ways in which it contributes are outlined below:

8.2.1. Theoretical contributions

8.2.1.1. Following are the theoretical contributions of the study 1:

The findings of our meta-analysis provide five insights on factors of CPV in CCI context that results in a CDO and allow the generalizable analyses of the results that were generated by studies adopting diverse methodologies.

1. We provide sufficient, that is, seven factors of perceived value and overall CPV that are positively associated with CDO. This helps extending the literatures on the three fields of perceived value, OMC and consumer behaviour.

2. This meta-analysis enabled extraction of conclusive observations across various product / service categories (like a financial services institution and a university, apparel, auto, clothing, electronic products and books, fashion, electronics, automatic coffee machine); various contexts (like channels like retail, service, e-tailers, mobile apps); countries of study (like U.S., South Africa, Spain, Mongolia, Malaysia, India, Germany, Finland and Sweden, China, Korea, European countries). We also classified literature through channel paradigm attribute into multichannel or omnichannel, research focus area through channel only, brand only, or both. We also extracted information pertaining to the channel deployed in the study, including standard stores, online, catalogue and

various emerging channels like app, website, etc. Also, context of the research was extracted, which includes retail (that is product), service, or others like live streaming, etc.

3. The critical information pertaining to the literature were extracted such as omnichannel dimensions, core theory, analytical method, and the number & type of samples used for carrying out empirical research study.

4. The perceived value factors of awareness, risk, convenience, trust, control, SE, and UP were identified from the body of literatures by aggregating certain constructs into them that carries similar operational definitions. The current study is a unique as to the best of our knowledge as none of the meta-analysis has been carried out to identify factors of CPV in CCI that impacts CDO.

5. he current study integrates existing research and reconciles previous findings, which offers cumulative insights into CDO of CPV factors.

6. The meta-analytic review was able to indicate the most influential factor of CPV in CCI environment as it facilitates investigation of the strengths of the relationships between the factor and CDO. It was found that the CPV ($r = 0.583$, $p = 0.000$) shows strongest relationship with CDO. Findings from this meta-analysis can be used as a guideline for researchers to select constructs for analyzing CPV. Results of meta-analysis provide researchers with an opportunity to visualize the point of convergence and divergence, which can lead to development and examination of future research questions in the general context. This helps to advance the knowledge of CPV in CCI environment, and its impact on various decision-making outcomes.

8.2.1.2. Following are the theoretical contributions of the study 2:

7. Taking demand-side perspective, we identify various factors of perceived value that the cross channel integration strategy of the brand gets translate into. Goersch (2002) provided theoretical framework on the benefits of omnichannel. We expanded the existing body of research by conducting an empirical investigation on the correlation between cross channel integration and several aspects of customer perceived value, as well as overall customer perceived value.

8. By taking demand-side perspective we provide a framework that shows how the cross-channel integration strategy of a brand impacts customer perception at major stages of their purchase journey. Instrument that measure customer perceptions were shortened through content access content adequacy test (Kerlinger,1973; Straub et al. 2004), as suggested by Mackenzie et al., 2011 , which was done by conducting survey to collect data from at least ten experienced academicians. The data on cross channel integration of brands was collected from the industry experts by converting 27 criteria provided by Cao et al., 2015 into the survey questionnaire. The data was collected for 8 different industry, covering 50 brands.

9. Our research elucidates the pivotal significance of customer perceived value and its constituent elements in the cross channel integration of a manufacturer-sponsor consumer brands. We conducted an empirical investigation into the mediating effects of CPV and CPV factors on the link between cross channel integration and customer behavior, specifically in terms of preference and loyalty. While prior research have established the fact that customer perceptions of cross channel integration affect behavioral outcomes such as omnichannel usage (W. Gao et al., 2021; Hart, 2017; Shen et al., 2018), consumer

empowerment (Min Zhang et al., 2018), customer engagement (Lee et al., 2019), very few studies have investigated behavior of loyalty (Frasquet and Miquel, 2017; Ieva & Ziliani, 2017), and preferences (Kaczorowska-Spychalska, 2017; Trenz et al., 2020) together. Our study differs from that of Frasquet and Miquel, 2017 as (a) the latter considered the offline retailers who has started 'transactional' online channels but are not genuinely cross integrated channels against our study that considers purely cross channel integrated brands, (b) loyalty towards online and offline has been separately concluded and not as a single construct of MCI capabilities as done in our study, (c) 'Survey' based measurement method (primary) was adopted where customers were asked to rate retailers on their being Multi-channel integrated (MCI). This has limitation, as consumers may not know about the retailers internal capacibilites on MCI against our study where we have asked the industry expert to evaluate brands based on the scale developed by Cao et al., 2015. Thus, our findings contribute to the existing information on the behavioral consequences of perceived value, preference, and loyalty. When customer perceive positive value from the cross channel integrated brands, which creates desirable behavioral outcomes of preference, and loyalty.

10. Our study differentiate itself from that of the one undertaken by Trenz et al. (2020), as we studied seven (awareness, convenience, risk, trust, control, ubiquitous personalization, and seamless experience) perceived value variables against latter two (convenience and risk). Further, our study cover complete customer purchase journey against acquisition and recovery covered by the latter. We conducted empirical test of the framework developed by Cao, et al., 2015 and segregate focal brands into four clusters based on their respective evolutionary level (stages) in a cross-channel integration continuum. This tests framework developed based on 'stage-of-adoption perspective of (Chaffey,

2010; J. Zhang et al., 2010) which was extended by (Cao & Li, 2015) against the experimental method adopted by Trenz et al., 2020 and also construct of MC was not measured.

11. Our study is unique as is based on cross channel integration strategy of brands and not channel as in the cross channel integrated environment, customers move freely among channels (online, mobile devices, and physical store), all within a single transaction process (Kaczorowska-Spychalska, 2017). Because the channels are managed together, the perceived interaction is not with the channel, but the brand (Juaneda-Ayensa et al., 2016). With channel integration, consumers no longer have to choose between either online or offline channels but have the flexibility of selecting retailers (referred to as brands) with distinct configurations of channel integration that match their preference (Trenz et al., 2020). As a result, by permeating individual channels of sales, simultaneity is observed at every level of undertaken activities. That is why a consumer does not notice any differences between them. What they notice is only the brand and related experiences.

12. There are few empirical studies that contributes towards both the domain of channel and brand; impact of touchpoints on brand preference (Baxendale et al., 2015), examines relationships among brand identity, brand image, and brand preference (Sääksjärvi & Samiee, 2011) in an OMC environment. First study brings out various ‘touch-points factors’ that leads towards change in brand preference but doesn’t explicitly study in the context of omni-channel as done in our study. Further, touchpoints considered are “Brand”, “Brand-owner”, “Retail” and “Third-party”, which arguably maybe the exhaustive list of possible touchpoints between brands and customers but does not explicitly

discuss its manifestation into shaping customers' perceived value of unified CCI capabilities of the brand, which is considered in our study.

The second study provide insights into the varied journey from developing brand identity, to brand image and brand preference of both the kinds of channels, offline & online, evolving or venturing into online, respectively. This study does not bring to the forth the cross-channel integration aspect of channel strategy, neither of channels nor of principle brands, as is done in our study.

13. Cocco and Demoulin, 2022 extended the study of Gao et al., 2021 by studying the process by which the strategy of omnichannel retailers influence customer behavior. We extend the literature further by studying the customer purchase journey process through CPV in their evaluation phase, preference in purchase phase, and loyalty in the post-purchase phase. Further, we studied brands instead of retailers as it's the brand that the customer experience in a cross channel integrated environment. Further, our findings reinforce the distinction between brand-controlled channel integration and the customer process of purchase journey by employing a two-level multilevel design (Cocco & Demoulin, 2022). Thus, this study provides empirical evidence of the relationships between omnichannel integration, customer perceived value and behavioral outcomes of preference and loyalty.

14. We also demonstrated mediation effect of factors of CPV and CPV on the relationship with CCI and preference.

15. Further, moderation impact of cross channel integration on the relationship of the overall customer perceived value with brand preference, and brand loyalty have been studied.

16. It has been shown that the brand preference have been created through multiple cognitive, and emotional dimensions of customer perceived value, which in itself is created due to cross channel integration capability of the brands.

17. The research shows impact of certain dimensions of consumer demographics variables on certain factors of the perceived value of consumers, brand preference, and brand loyalty. This partially contradicts previous research that indicate no substantial influence of customer demographics on their choices. (Bucklin et al., 1995; Rossi et al., 1996).

8.2.2. Methodological implications

Research can assert three methodological implications:

1. This thesis includes a meta-analysis that analyzed 384 effect sizes from 94 research, which were chosen from a total of 875 recognized papers on CDO. The objective of the analysis was to investigate the influence of awareness, risk, convenience, trust, control, universal personalization (UP), seamless experience (SE), and overall customer perceived value (CPV) on customer decision outcome (CDO) inside an online mobile commerce (OMC) environment. The scope of the study search was restricted to October 2023 and covered almost 20 years of prior studies. In this study various dimension of customer perceived value were clubbed into these eight dimenions, and similarly various consumer behavior dimensions were analysed by coining customer decision outcome.
2. The two empirical study comprises of two primary data collection, each from the industry-experts, and consumer in different waves in the same order. As the consumer data was found to be nested within brands, multilevel modeling (MLM) was adopted. MLM addresses the homogeneity concerns of traditional

SEMs by considering the variety of regression slopes. This tool allows for the concurrent examination of data at both the brand and customer levels, while considering the interdependencies between these levels. MLM offers superior estimate of standard errors, significance levels, and confidence intervals compared to classical SEM. This is achieved by circumventing misspecification and bias in standard errors (Hox, 2010). In order to test the hypotheses, with MLM approach it is possible to analyze the direct impacts on both the customer (level_1) and brand (level_2) levels, while considering the interdependencies within the data.

3. Both the empirical studies incorporated endogeneity testing through the multilevel generalized method of moment's (GMM) technique (Kim and Frees, 2007), and the REndo package in R (Gui et al., 2023) was used to implement the multilevelIV() function for identification of the omitted variables at different data levels.

8.2.3. Managerial implications

8.2.3.1. Following are the managerial contributions of the study 1

What to focus on to gain favourable customer decision output?

To enhance CDO, should a retailer and brands focus on (a) being able to disseminate information, reduce information asymmetry, and enhance recognition about its products and services offerings (awareness), (b) enhance trustworthiness through benevolence, competency, integrity, and by securing private information (trust), (c) neutralizing risk likelihood and severity through transparency, and assurances, and ethics (risk), (d) facilitate customer with enhanced ease, freedom, speed, where time and effort sacrifices are reduced (convenience), (e) providing customer with an environment where she can feel in control during their purchase decision-making process (control), (f) establishes strong cooperation between its functional areas, processes, and capabilities such that customer have an unending,

uninterrupted experience while navigating through different channels (seamless experience), (g) provide customization so that customers can choose their channel combination that suits them (ubiquitous personalization), or (h) providing overall perceived value by incorporating all the above seven factors of CPV. Our analyses suggest that all the above are important. However, as anticipated overall CPV has the highest influence on the CDO. Its average effect is 27% higher than SE, and 92% higher than awareness. However, out of the seven factors of CPV, we found that SE has the highest influence on the CDO, with 6 to 7.5% higher than UP, trust, convenience, and control in that order. Lowest influence was observed with awareness (52%) below that of SE. Lowest negative effect observed with perceived risk, which implies that the customer does not perceive CCI services as risky.

This finding support the need to improve seamless experience with the customer. However, enhancing UP, trust, convenience, and control shall yield similar outcome.

8.2.3.2. Following are the managerial contributions of the study 2

This study is directly applicable and useful for all brands implementing omnichannel strategy, especially manufacturer-sponsor consumer brands.

1. First, against prior studies that focused on such strategy of retailers (multi-brand retailer – MBR) like Big Bazaar, Reliance, Shopper Shop, etc., we extended the study and dedicated it for the principal brands (single-brand retailer - SBR) like Starbucks, Ikea, Adidas, Nike, etc. as the latter is trying to regain ground that has been lost to retailers in the recent times due to increase in retailers' power as it has become highly concentrated due to emergence of the mega-formats, mergers and acquisitions, horizontal alliances (Brynjolfsson et al., 2013). Further, retailer has developed capabilities to control market access, influence

customer buying behavior and capture customer loyalty with effective merchandising, innovative private-label offerings, targeted pricing & rewards programs, and by integrating their various channels. So, for brands to regain their grounds from retailers, it's inevitable that they develop their own capabilities to cultivate their own relationship with the customers as a competing strategy, which is one of the strategies to be adopted by them in this dynamic environment (https://oroinc.com/b2b-ecommerce/blog/manufacturers-selling-direct-consumers/?16e6059988bcb98eb7fcf82111dd267d=1), the other two being (1) addressing retailers' need and (2) collaborating with them through customer-centric approach. So, our model will help brands to understand their current level of cross channel integration and develop capabilities to evolve into the higher level to enhance customer perceived value, to attain ultimate goal of creating preference and loyalty amongst prospects and customers, respectively.

2. Brands should integrate channels to achieve higher degree of customer perceived value, in line with the relationship established in this study. The model is robust as it has been empirical tested by getting the brands evaluated by the practitioners of over 15 years, themselves. The other set of data has come directly from the customers who has given ratings on their current or last three years of a purchase and usage experience. Our model provide vital inputs to the manager on the benefits of integrating their various channels to reach their potential and existing customers, which they can adopt to enhance customer experience during their purchase journey. The model clearly shows that the brands with higher degree of cross channel integration will be able to enhance customer perceived value through elevated factors of enhanced-customer empowerment, customer-based brand equity, and seamless experience than those in their lower degree of CCI. This elated factors further enhance brand

preference in the decision-making phase of the customer through elevated customer perceived value, which in turn improves loyalty and discourages switching behavior of the customer when they are their post-purchase stage. This information will help the manager and as demonstrated in the study 27-item omnichannel scale developed by Cao et al., 2015 that can be used as a checklist to help them achieve their internal goal on integrationness and customer goal on preference and loyalty. The scale indicates many areas where brands might enhance their capabilities.

3. This study substantial that higher level of cross channel integration does not significantly impact risk negatively, which implies that even if the brands are either completely siloed or integrated, the negative effect is not significant as their being multi-channel itself is enough for customers to perceive it as a negative value. Literature support this understanding as the construct has been studied in a MC environment, one of which states that the customer can have safe and secured shopping experience by using combinations of channels (may not be integrated) as can gain from the benefits it provides and overcome the deficiencies of an individual channels (J. Zhang et al., 2010). Access to both physical inspection, pickup is possible and so as assurance of right payment in cross channel settings. This results to an assurance to a reduced risk perception. Further, integration and consistency of branding across channels in cross-channel integrated brands allows consumer to transfer positive brand image associated with one channel to another (Dholakia & Zhao, 2010), which might thereby mitigate customers' perceived risk regard to brand choices (Kwon & Lennon, 2009).

4. This study provides evidence of a moderating role of a cross channel integration in the relationship between customer perceived value and brand preference.

Further, the study provides evidence of the moderating role of a cross channel integration on the indirect effect of the factors of CPV on brand preference & brand loyalty, and further indirect effect of CPV on brand loyalty.

This gives manager and marketer a complete understanding of the cross channel integration and its holistic impact on the customer behaviour. This not only affects customers' perception of CEmp, awareness, SE, and CPV, directly but also moderates further direct and indirect positive relationships in the subsequent purchase journey stages, providing multiple effects. Manager and marketer, by applying the scale, can predict the multiple effect not only on the perception but on purchase and repeat purchase decision.

8.2.4. Research novelty

The novelty of this thesis lies in the execution of five studies based on the five themes identified through the literature review and gap analysis. These themes include examining manufacturer-sponsor brands, analyzing the demand-side perspective, exploring cross channel integration as a service, investigating consumer behavior regarding brand preference, and studying brand loyalty across different product categories.

The uniquenessof this study is further elicited as is the first to build a model cross channel integration of manufacturer-sponsor consumer brands, and examine its impact on various dimension of customer perceived value, and overall perceived value. Futher, we build a model for both brand preference and brand loyalty and studied impact various dimensions of perceived value and overall perceived on them. We further examined influence of brand preference on brand loyalty.

The study is a unique as the relationship of manufacturer-sponsor consumer brands' cross channel integration with consumer behavior of brand preference and brand loyalty have been studied through multiple consumer evaluation criteria of perceived value, through multiple models using both bivariate and configurational approach.

In additional, various factors of customer perceived value was so choosen that it uncovers both cognitive and emotional, and social dimensions that form brand preference, and brand loyalty.

Further, this is the first model wherein multilevel model was utilized to analyse the data in the context, where the bridge is created between their domain in the literature; omnichannel, customer perceived value, consumer behavior, and branding.

8.2.5. Limitations and future research

17.1.1. Study 1

This research was conducted to provide an overview of previous findings, which are disseminated across a great number of empirical studies of CPV in an OMC environment research. However, there are some limitations, which need to be mentioned. During the data collection stage, it was noticed that not all published studies on CPV provide enough relevant data, which can be used to conduct a meta-analysis. As a result, these studies were not included in this research.

This study only considered quantitative studies and excluded qualitative studies. Thus, future studies could include both types of studies in the meta-analysis. The current study calculated the availability bias to determine how many insignificant effects needed to exist to change the significant correlations. By using the approach

described by Hunter and Schmidt (2004), it was found that a minimum of forty insignificant effects is needed.

The study did not take into consideration the analysis of moderating variables due to an insufficient number of studies on moderating effects as the concept of multichannel is in existence since almost last two decades.

Despite the above limitations, this is the first comprehensive study of factors CPV, which provides a platform for obtaining a consolidated view of factors affecting CDO in CCI context, advancing current knowledge in the domain

The findings of this meta-analysis study provide several avenues for future research. First of all, we have identified a specific gap in the current literature, ie. lack of integration in the CPV related aspect of CCI. Our meta-analysis will motivate researchers to consider this topic in a more focused, fruitful manner that can contribute to the current understanding of this domain. Some specific issues have also been unearthed. It is found that economic incentives play an important role in creating CPV in CCI. However, future studies should investigate the effect of economic incentives over time. Furthermore, future studies could investigate more factors related to personal conditions. According to the theory of planned behaviour, attitude plays an important role in individuals' behaviour. Thus, future studies can investigate how the factors of CPV affects attitude towards CDO in CCI contexts.

In terms of methodology, our meta-analysis takes into account the correlation coefficient as an effect sizes. Future study can consider unstandardized coefficient and/or path coefficient and understand impact of these factors of CPV on CDO in CCI context.

We studied this meta-analysis by taking demand-side view of the CCI context for understanding CDO. Future studies can take supply-side view of the CCI context for understanding its impact on organizational profitability, sales, etc. Our study comprises of first-order factors of CPV. Future study can identify second-order and tertiary-order factors of CPV, which is related to these factors identified in this study. So, then the meta-analysis can be conducted on this second-order and tertiary-order model structure to gain future insight into multi-level model of CPV.

We have taken CCI or OMC as a service approach, which the organization undertake to generate loyalty or preference. Future study can integrate this thought with that of the 'Service-Profit Chain' model and can conduct meta-analysis to understand various kind/s of resources that the organization can deploy to maximize its profit, during their evolving journey from multi-channel to OMC organization.

17.1.2. Study 2

While our findings remain consistent across different brands, several difficulties necessitate more examination.

1. While our study successfully examines the cross-channel integration of multiple brands across various industries and analyzes customer perception of these brands, it also offers precise guidelines for omnichannel brands. However, it is important to acknowledge that different organizations have distinct operational procedures that impact their integration efforts. Additionally, the omnichannel strategy encompasses all aspects of a firm, beginning with its vision, purpose, corporate objectives, and overall strategy, and concluding with the execution across different departments and the supply chain (Piotrowicz and Cuthbertson, 2014; Saghiri et al., 2017). To gain a comprehensive

understanding of the impact of omnichannel integration on customer brand evaluation and behavior, it would be beneficial to conduct a survey that focuses on internal operational integration initiatives. This survey would complement existing efforts to measure the extent of integration and provide a broader perspective on integration quality.

2. Future study should investigate the customer journeys to understand how customers perceive the value of a brand's cross-channel integration service capabilities at different stages (before purchase, during purchase, and after purchase) and how this perception affects their behavior. In the current study, we assumed that the brand cross channel integration stage is constant across the complete customer purchase journey and hence the respective customer perceived value, which may not be the case as perception is dynamic and brands may not emit consistent integration capability throughout the journey. An examination of the perceived consistency throughout different stages of the shopping process, along with an analysis of touchpoint and channel activities in typical journeys, will offer managers more comprehensive insights for generating positive perceived value. This perceived value is crucial in cultivating customer preference and loyalty.

3. Studies suggests that apart from OMC-service-driven customer perceived value there are several antecedent to brand preference like brand credibility (Strebel et al., 2004), advertisement and promotion (Mela et al., 1997), culture distinctiveness (Torelli et al., 2017), brand association (Aron O' Cass and Lim, 2002), touchpoints (Baxendale et al., 2015), promotion, price, and availability of product, attractive packaging and product quality (Chimboza & Mutandwa, 2007). Similarly, studies suggests that apart from OMC-service-driven customer perceived value there are several antecedent to brand loyalty like

social media advertising (J. Hanaysha, 2016), social media marketing efforts (Godey et al., 2016), trust and affect (Hur et al., 2011), customer-brand relationship (He et al., 2012). A simultaneous study of effects of these constructs along with OMC service-driven CPV shall further throw light on the relative intensity of these effects to understand the role of cross channel integration vis-à-vis tradition drivers in the current times. Managers and marketers would like to deploy resources that has better cost-benefit ratio and gives better returns for the organization (Heskett et al., 2008) and desired customer brand preference / loyalty.

4. Lastly, several studies suggests that omnichannel behavior is affected by the customer characteristics like attitude and behaviour (Hart, 2017; S. Lee & Lim, 2017), belief (Bendoly et al., 2005); type of retailers (Emrich et al., 2015); social contagion (Bilgicer et al., 2015), which could have a moderating effect on the relationship between cross channel integration and customer perceived value. This shall help managers and marketers to take appropriate decision on the area in which they need to deploy their resources for the relevant capability development so that the outcome is maximized from supply-side perspective of maximization of sales, revenue and demand-side perspective of enhancing brand preference and loyalty.

Annexure A: The variables' skewness and kurtosis, computed at item level

Items	Mean	Min	Max	Std. Deviation	Variance	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
brawerns1	5.56	1	7	1.281	1.642	-1.276	0.051	1.937	0.102
brawerns2	5.53	1	7	1.241	1.54	-1.185	0.051	1.61	0.102
brawerns3	5.51	1	7	1.228	1.508	-1.227	0.051	1.8	0.102
brawerns4	5.64	1	7	1.172	1.374	-1.327	0.051	2.345	0.102
brawerns5	5.69	1	7	1.206	1.454	-1.314	0.051	2.124	0.102
brawerns6	5.66	1	7	1.188	1.412	-1.374	0.051	2.466	0.102
trust1	5.56	1	7	1.218	1.485	-1.296	0.051	2.147	0.102
trust2	5.59	1	7	1.206	1.455	-1.336	0.051	2.383	0.102
trust3	5.46	1	7	1.257	1.581	-1.18	0.051	1.519	0.102
risk1	2.78	1	7	1.456	2.121	1.17	0.051	0.884	0.102
risk2	2.72	1	7	1.41	1.987	1.171	0.051	1.068	0.102
risk3	2.87	1	7	1.492	2.227	1.052	0.051	0.549	0.102
risk4	2.94	1	7	1.534	2.354	1.007	0.051	0.31	0.102
conv1	5.42	1	7	1.243	1.546	-1.227	0.051	1.821	0.102
conv2	5.47	1	7	1.19	1.415	-1.147	0.051	1.564	0.102
conv3	5.46	1	7	1.195	1.428	-1.033	0.051	1.148	0.102
conv4	5.4	1	7	1.234	1.524	-1.125	0.051	1.46	0.102
conv5	5.59	1	7	1.155	1.334	-1.231	0.051	2.099	0.102
conv6	5.58	1	7	1.152	1.326	-1.186	0.051	1.85	0.102
conv7	5.51	1	7	1.161	1.347	-1.119	0.051	1.702	0.102
contl1	5.54	1	7	1.135	1.288	-1.049	0.051	1.411	0.102
contl2	5.38	1	7	1.254	1.572	-1.085	0.051	1.284	0.102

contl3	5.53	1	7	1.166	1.36	-1.073	0.051	1.464	0.102
contl4	5.52	1	7	1.182	1.397	-1.132	0.051	1.621	0.102
contl5	5.5	1	7	1.151	1.324	-1.091	0.051	1.452	0.102
contl6	5.49	1	7	1.152	1.328	-1.041	0.051	1.233	0.102
contl7	5.54	1	7	1.147	1.315	-1.134	0.051	1.621	0.102
contl8	5.5	1	7	1.178	1.388	-1.111	0.051	1.516	0.102
ubqtprsan1	5.55	1	7	1.134	1.285	-0.984	0.051	1.084	0.102
ubqtprsan2	5.45	1	7	1.205	1.451	-1.015	0.051	1.162	0.102
seamlexp1	5.51	1	7	1.151	1.324	-1.042	0.051	1.331	0.102
seamlexp2	5.57	1	7	1.161	1.347	-1.115	0.051	1.487	0.102
seamlexp3	5.57	1	7	1.161	1.349	-1.148	0.051	1.564	0.102
seamlexp4	5.48	1	7	1.226	1.503	-1.173	0.051	1.511	0.102
seamlexp5	5.42	1	7	1.315	1.729	-1.184	0.051	1.366	0.102
seamlexp6	5.32	1	7	1.363	1.857	-1.161	0.051	1.205	0.102
brprcptn1	5.49	1	7	1.24	1.538	-1.2	0.051	1.76	0.102
brprcptn2	5.44	1	7	1.257	1.579	-1.166	0.051	1.458	0.102
brprcptn3	5.45	1	7	1.247	1.556	-1.206	0.051	1.62	0.102
brprcptn4	5.42	1	7	1.272	1.618	-1.185	0.051	1.568	0.102
brloylty1	5.43	1	7	1.287	1.656	-1.19	0.051	1.545	0.102
brloylty2	5.58	1	7	1.201	1.443	-1.245	0.051	1.834	0.102
brloylty3	5.57	1	7	1.202	1.445	-1.177	0.051	1.659	0.102
brloylty4	5.46	1	7	1.288	1.659	-1.176	0.051	1.362	0.102
brloylty5	5.52	1	7	1.223	1.495	-1.175	0.051	1.619	0.102
quality1	5.49	1	7	1.203	1.447	-1.123	0.051	1.527	0.102
quality2	5.5	1	7	1.185	1.405	-1.138	0.051	1.634	0.102
quality3	5.47	1	7	1.2	1.44	-1.087	0.051	1.399	0.102
quality4	5.47	1	7	1.164	1.354	-0.972	0.051	1.073	0.102

emotnlrspn1	5.46	1	7	1.146	1.314	-0.966	0.051	1.043	0.102
emotnlrspn2	5.45	1	7	1.17	1.37	-0.976	0.051	1.126	0.102
emotnlrspn3	5.45	1	7	1.171	1.371	-1.04	0.051	1.344	0.102
emotnlrspn4	5.44	1	7	1.197	1.432	-1.062	0.051	1.455	0.102
emotnlrspn5	5.45	1	7	1.171	1.372	-1.013	0.051	1.179	0.102
behavprice1	5.48	1	7	1.185	1.405	-1.116	0.051	1.511	0.102
behavprice2	5.47	1	7	1.212	1.469	-1.142	0.051	1.519	0.102
behavprice3	5.53	1	7	1.137	1.293	-1.046	0.051	1.432	0.102
behavprice4	5.45	1	7	1.182	1.398	-1.055	0.051	1.228	0.102
behavprice5	5.5	1	7	1.161	1.347	-1.069	0.051	1.425	0.102
emotresp1	5.51	1	7	1.186	1.407	-1.12	0.051	1.396	0.102
emotresp2	5.5	1	7	1.171	1.37	-1.089	0.051	1.441	0.102
emotresp3	5.46	1	7	1.172	1.375	-1.04	0.051	1.148	0.102
emotresp4	5.47	1	7	1.181	1.396	-1.086	0.051	1.307	0.102
emotresp5	5.43	1	7	1.193	1.423	-1.025	0.051	1.127	0.102
custperval1	5.52	1	7	1.152	1.327	-1.147	0.051	1.531	0.102
custperval2	5.48	1	7	1.196	1.431	-1.183	0.051	1.568	0.102
custperval3	5.47	1	7	1.192	1.422	-1.157	0.051	1.599	0.102
age	2.16	1	5	0.939	0.882	0.402	0.051	-0.462	0.102
education	2.98	1	5	0.74	0.547	0.009	0.051	0.267	0.102
gender	1.41	1	4	0.53	0.281	0.994	0.051	1.253	0.102
income	2.22	1	7	1.234	1.524	1.614	0.051	3.425	0.102
familysize	1.87	1	3	0.591	0.349	0.04	0.051	-0.252	0.102

Annexure B: Assessment of normality (Group number 1) (Mardia's coefficient)

Variable	min	max	skew	c.r.	kurtosis	c.r.
income	1.000	7.000	1.613	31.725	3.415	33.572
gender	1.000	4.000	.993	19.524	1.247	12.264
education	1.000	5.000	.009	.173	.264	2.598
familysize	1.000	3.000	.040	.793	-.254	-2.494
age	1.000	5.000	.402	7.908	-.464	-4.557
MaxAv_Score_Large2	4.800	28.000	.730	14.362	.168	1.656
brloylty5	1.000	7.000	-1.174	-23.083	1.613	15.859
brloylty4	1.000	7.000	-1.175	-23.103	1.356	13.335
brloylty3	1.000	7.000	-1.177	-23.135	1.653	16.253
brloylty2	1.000	7.000	-1.244	-24.470	1.827	17.965
brloylty1	1.000	7.000	-1.189	-23.378	1.539	15.132
brprcptn4	1.000	7.000	-1.184	-23.286	1.562	15.355
brprcptn3	1.000	7.000	-1.205	-23.692	1.614	15.868
brprcptn2	1.000	7.000	-1.166	-22.919	1.452	14.281
brprcptn1	1.000	7.000	-1.199	-23.587	1.754	17.246
custperval3	1.000	7.000	-1.157	-22.744	1.593	15.667
custperval2	1.000	7.000	-1.182	-23.244	1.562	15.362
custperval1	1.000	7.000	-1.147	-22.546	1.525	14.994
risk4	1.000	7.000	1.006	19.787	.307	3.016
risk3	1.000	7.000	1.051	20.667	.546	5.364
risk2	1.000	7.000	1.171	23.019	1.063	10.449
risk1	1.000	7.000	1.169	22.993	.880	8.650

Variable	min	max	skew	c.r.	kurtosis	c.r.
seamlexp6	1.000	7.000	-1.161	-22.821	1.200	11.801
seamlexp5	1.000	7.000	-1.183	-23.265	1.360	13.375
seamlexp4	1.000	7.000	-1.172	-23.044	1.505	14.798
seamlexp3	1.000	7.000	-1.147	-22.558	1.558	15.319
MaxAv_Score_Large1	6.400	28.000	.429	8.429	-1.278	-12.565
MaxAv_Score_Large3	3.200	24.286	.498	9.784	1.651	16.228
trust3	1.000	7.000	-1.179	-23.182	1.513	14.878
trust2	1.000	7.000	-1.335	-26.246	2.375	23.354
trust1	1.000	7.000	-1.295	-25.462	2.140	21.040
brawerns6	1.000	7.000	-1.373	-27.003	2.458	24.168
brawerns5	1.000	7.000	-1.313	-25.821	2.116	20.808
brawerns4	1.000	7.000	-1.326	-26.072	2.338	22.986
brawerns3	1.000	7.000	-1.226	-24.118	1.794	17.635
brawerns2	1.000	7.000	-1.184	-23.279	1.604	15.770
brawerns1	1.000	7.000	-1.275	-25.081	1.930	18.973
conv1	1.000	7.000	-1.226	-24.113	1.814	17.836
conv2	1.000	7.000	-1.147	-22.548	1.558	15.318
conv3	1.000	7.000	-1.032	-20.294	1.143	11.238
conv4	1.000	7.000	-1.124	-22.100	1.454	14.300
conv5	1.000	7.000	-1.230	-24.188	2.091	20.563
conv6	1.000	7.000	-1.185	-23.301	1.844	18.128
conv7	1.000	7.000	-1.118	-21.994	1.696	16.670
contl1	1.000	7.000	-1.049	-20.623	1.405	13.814
contl2	1.000	7.000	-1.085	-21.331	1.279	12.571

Variable	min	max	skew	c.r.	kurtosis	c.r.
contl3	1.000	7.000	-1.072	-21.082	1.458	14.337
contl4	1.000	7.000	-1.131	-22.244	1.615	15.880
contl5	1.000	7.000	-1.090	-21.430	1.446	14.221
contl6	1.000	7.000	-1.041	-20.465	1.228	12.070
contl7	1.000	7.000	-1.133	-22.285	1.615	15.880
contl8	1.000	7.000	-1.110	-21.837	1.510	14.844
ubqtprsan1	1.000	7.000	-.983	-19.329	1.079	10.613
ubqtprsan2	1.000	7.000	-1.014	-19.941	1.157	11.374
seamlexp1	1.000	7.000	-1.042	-20.486	1.326	13.037
seamlexp2	1.000	7.000	-1.114	-21.902	1.481	14.559
Multivariate					1547.051	462.270

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